10/25/2005
Bank: (Commercial Pilot)
Airman Knowledge Test Question Bank

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1. H921 COM

Load factor is the lift generated by the wings of an aircraft at any given time

A) divided by the total weight of the aircraft.

B) multiplied by the total weight of the aircraft.

C) divided by the basic empty weight of the aircraft.

2. H921 COM

Baggage weighing 90 pounds is placed in a normal category airplane's baggage compartment which is placarded at 100 pounds. If this airplane is subjected to a positive load factor of 3.5 G's, the total load of the baggage would be

A) 315 pounds and would be excessive.

B) 315 pounds and would not be excessive.

C) 350 pounds and would not be excessive.

3. H921 COM

While holding the angle of bank constant in a level turn, if the rate of turn is varied the load factor would

A) remain constant regardless of air density and the resultant lift vector.

B) vary depending upon speed and air density provided the resultant lift vector varies proportionately.

C) vary depending upon the resultant lift vector.

4. H912 COM

During the transition from straight-and-level flight to a climb, the angle of attack is increased and lift

A) is momentarily decreased.

B) remains the same.

C) is momentarily increased.

5. H912 COM

Lift on a wing is most properly defined as the

A) force acting perpendicular to the relative wind.

B) differential pressure acting perpendicular to the chord of the wing.

C) reduced pressure resulting from a laminar flow over the upper camber of an airfoil, which acts perpendicular to the mean camber.

6. H912 COM

As airspeed decreases in level flight below that speed for maximum lift/drag ratio, total drag of an airplane

A) decreases because of lower parasite drag.

B) increases because of increased induced drag.

C) increases because of increased parasite drag.

7. H912 COM

By changing the angle of attack of a wing, the pilot can control the airplane's

A) lift, airspeed, and drag.

B) lift, airspeed, and CG.

C) lift and airspeed, but not drag.

8. H914 COM

An airplane leaving ground effect will

A) experience a reduction in ground friction and require a slight power reduction.

B) experience an increase in induced drag and require more thrust.

C) require a lower angle of attack to maintain the same lift coefficient.

9. H942 COM

What performance is characteristic of flight at maximum lift/drag ratio in a propeller-driven airplane? Maximum

A) gain in altitude over a given distance.

B) range and maximum distance glide.

C) coefficient of lift and minimum coefficient of drag.

10. H940 COM

Recovery from a stall in any airplane becomes more difficult when its

A) center of gravity moves forward.

B) elevator trim is adjusted nosedown.

C) center of gravity moves aft.

11. H917 COM

Longitudinal stability involves the motion of the airplane controlled by its

A) rudder.

B) elevator.

C) ailerons.

12. H921 COM

The need to slow an aircraft below VA is brought about by the following weather phenomenon:

A) High density altitude which increases the indicated stall speed.

B) Turbulence which causes an increase in stall speed.

C) Turbulence which causes a decrease in stall speed.

13. H946 COM

(Refer to figure 35.)

GIVEN:

| | |
|---|---|
| Temperature | 85 °F |
| Pressure altitude | 6,000 ft |
| Weight | 2,800 lb |
| Headwind | 14 kts |

Determine the approximate ground roll.

A) 742 feet.

B) 1,280 feet.

C) 1,480 feet.

14. H948 COM

(Refer to figure 2.) Select the correct statement regarding stall speeds. The airplane will stall

A) 10 knots higher in a power-on, 60° bank, with gear and flaps up, than with gear and flaps down.

B) 25 knots lower in a power-off, flaps-up, 60° bank, than in a power-off, flaps-down, wings-level configuration.

C) 10 knots higher in a 45° bank, power-on stall, than in a wings-level stall with flaps up.

15. H983 COM

If fuel consumption is 80 pounds per hour and groundspeed is 180 knots, how much fuel is required for an airplane to travel 460 NM?

A) 205 pounds.

B) 212 pounds.

C) 460 pounds.

16. A02 COM

Maximum structural cruising speed is the maximum speed at which an airplane can be operated during

A) abrupt maneuvers.

B) normal operations.

C) flight in smooth air.

17. H921 COM

(Refer to figure 5.) The vertical line from point D to point G is represented on the airspeed indicator by the maximum speed limit of the

A) green arc.

B) yellow arc.

C) white arc.

18. A150 COM

If an airplane category is listed as utility, it would mean that this airplane could be operated in which of the following maneuvers?

A) Limited acrobatics, excluding spins.

B) Any maneuver except acrobatics or spins.

C) Limited acrobatics, including spins (if approved).

19. I30 COM

Which is true regarding the use of airborne weather-avoidance radar for the recognition of certain weather conditions?

A) The radarscope provides no assurance of avoiding instrument weather conditions.

B) The avoidance of hail is assured when flying between and just clear of the most intense echoes.

C) The clear area between intense echoes indicates that visual sighting of storms can be maintained when flying between the echoes.

20. H926 COM

Which is true regarding the use of flaps during level turns?

A) The lowering of flaps increases the stall speed.

B) The raising of flaps increases the stall speed.

C) Raising flaps will require added forward pressure on the yoke or stick.

21. H931 COM

Which airspeed would a pilot be unable to identify by the color coding of an airspeed indicator?

A) The never-exceed speed.

B) The power-off stall speed.

C) The maneuvering speed.

22. H931 COM

To determine pressure altitude prior to takeoff, the altimeter should be set to

A) the current altimeter setting.

B) 29.92 inches Hg and the altimeter indication noted.

C) the field elevation and the pressure reading in the altimeter setting window noted.

23. L52 COM

During preflight in cold weather, crankcase breather lines should receive special attention because they are susceptible to being clogged by

A) congealed oil from the crankcase.

B) moisture from the outside air which has frozen.

C) ice from crankcase vapors that have condensed and subsequently frozen.

24. L52 COM

If necessary to take off from a slushy runway, the freezing of landing gear mechanisms can be minimized by

A) recycling the gear.

B) delaying gear retraction.

C) increasing the airspeed to VLE before retraction.

25. H928 COM

Detonation may occur at high-power settings when

A) the fuel mixture ignites instantaneously instead of burning progressively and evenly.

B) an excessively rich fuel mixture causes an explosive gain in power.

C) the fuel mixture is ignited too early by hot carbon deposits in the cylinder.

26. H928 COM

The mixture control can be adjusted, which

A) prevents the fuel/air combination from becoming too rich at higher altitudes.

B) regulates the amount of air flow through the carburetor's venturi.

C) prevents the fuel/air combination from becoming lean as the airplane climbs.

27. H928 COM

Fouling of spark plugs is more apt to occur if the aircraft

A) gains altitude with no mixture adjustment.

B) descends from altitude with no mixture adjustment.

C) throttle is advanced very abruptly.

28. L52 COM

Which is true regarding preheating an aircraft during cold weather operations?

A) The cabin area as well as the engine should be preheated.

B) The cabin area should not be preheated with portable heaters.

C) Hot air should be blown directly at the engine through the air intakes.

29. K20 COM

A detuning of engine crankshaft counterweights is a source of overstress that may be caused by

A) rapid opening and closing of the throttle.

B) carburetor ice forming on the throttle valve.

C) operating with an excessively rich fuel/air mixture.

30. H928 COM

In aircraft equipped with constant-speed propellers and normally-aspirated engines, which procedure should be used to avoid placing undue stress on the engine components? When power is being

A) decreased, reduce the RPM before reducing the manifold pressure.

B) increased, increase the RPM before increasing the manifold pressure.

C) increased or decreased, the RPM should be adjusted before the manifold pressure.

31. H928 COM

Which statement best describes the operating principle of a constant-speed propeller?

A) As throttle setting is changed by the pilot, the prop governor causes pitch angle of the propeller blades to remain unchanged.

B) A high blade angle, or increased pitch, reduces the propeller drag and allows more engine power for takeoffs.

C) The propeller control regulates the engine RPM, and in turn, the propeller RPM.

32. J13 COM

Who has the final authority to accept or decline any 'land and hold short' (LAHSO) clearance?

A) Airplane owner/operator.

B) ATC tower controller.

C) Pilot-in-command.

33. J13 COM

When should pilots decline a 'land and hold short' (LAHSO) clearance?

A) If runway surface is contaminated.

B) When it will compromise safety.

C) Only when the tower controller concurs.

34. J13 COM

What is the minimum visibility and ceiling required for a pilot to receive a 'land and hold short' clearance?

A) 3 nautical miles and 1,000 feet.

B) 3 statute miles and 1,000 feet.

C) 3 statute miles and 1,500 feet.

35. J05 COM

(Refer to figure 51.) While clearing an active runway, you are most likely clear of the ILS critical area when you pass which sign?

A) Top red.

B) Middle yellow.

C) Bottom yellow.

36. J05 COM

(Refer to figure 51.) When taxiing up to an active runway, you are likely to be clear of the ILS critical area when short of which symbol?

A) Top red.

B) Middle yellow.

C) Bottom yellow.

37. J05 COM

(Refer to figure 51.) Which symbol does not directly address runway incursion with other aircraft?

A) Top red.

B) Middle yellow.

C) Bottom yellow.

38. J05 COM

(Refer to figure 51.) The red symbol at the top would most likely be found

A) upon exiting all runways prior to calling ground control.

B) at an intersection where a roadway may be mistaken as a taxiway.

C) near the approach end of ILS runways.

39. J05 COM

(Refer to figure 51.) The pilot generally calls ground control after landing when the aircraft is completely clear of the runway. This is when the aircraft

A) passes the red symbol shown at the top of the figure.

B) is on the dashed-line side of the middle symbol.

C) is past the solid-line side of the middle symbol.

40. B08 COM

When approaching to land at an airport, without an operating control tower, in Class G airspace, the pilot should

A) enter and fly a traffic pattern at 800 feet AGL.

B) make all turns to the left, unless otherwise indicated.

C) fly a left-hand traffic pattern at 800 feet AGL.

41. J37 COM

(Refer to figure 53)

GIVEN:

| | |
|---|---|
| Location -Madera Airport (MAE) | |
| Altitude | 1,000 ft AGL |
| Position | 7 NM north of Madera (MAE) |
| Time | 3 p.m. local |
| Flight visibility | 1 SM |

You are VFR approaching Madera Airport for a landing from the north. You

A) are in violation of the CFR's; you need 3 miles of visibility under VFR.

B) are required to descend to below 700 feet AGL to remain clear of Class E airspace and may continue for landing.

C) may descend to 800 feet AGL (Pattern Altitude) after entering Class E airspace and continue to the airport.

42. B08 COM

Which is true regarding flight operations in Class B airspace?

A) The pilot must receive an ATC clearance before operating an aircraft in that area.

B) Flight under VFR is not authorized unless the pilot in command is instrument rated.

C) Solo student pilot operations are not authorized.

43. B08 COM

Which is true regarding pilot certification requirements for operations in Class B airspace?

A) The pilot in command must hold at least a private pilot certificate with an instrument rating.

B) The pilot in command must hold at least a private pilot certificate.

C) Solo student pilot operations are not authorized.

44. J37 COM

When a dashed blue circle surrounds an airport on a sectional aeronautical chart, it will depict the boundary of

A) Special VFR airspace.

B) Class D airspace.

C) Class B airspace

45. B08 COM

When operating an aircraft in the vicinity of an airport with an operating control tower, in Class E airspace, a pilot must establish communications prior to

A) 5 NM, and up to and including 3,000 feet AGL.

B) 8 NM, and up to and including 3,000 feet AGL.

C) 4 NM, and up to and including 2,500 feet AGL.

46. J37 COM

(Refer to figure 52, point 9) The alert area depicted within the blue lines is an area in which

A) there is a high volume of pilot training activities or an unusual type of aerial activity, neither of which is hazardous to aircraft.

B) the flight of aircraft is prohibited.

C) the flight of aircraft, while not prohibited, is subject to restriction.

47. J29 COM

When in the vicinity of a VOR which is being used for navigation on VFR flights, it is important to

A) make 90° left and right turns to scan for other traffic.

B) exercise sustained vigilance to avoid aircraft that may be converging on the VOR from other directions.

C) pass the VOR on the right side of the radial to allow room for aircraft flying in the opposite direction on the same radial.

48. L34 COM

How can you determine if another aircraft is on a collision course with your aircraft?

A) The nose of each aircraft is pointed at the same point in space.

B) The other aircraft will always appear to get larger and closer at a rapid rate.

C) There will be no apparent relative motion between your aircraft and the other aircraft.

49. J22 COM

To use VHF/DF facilities for assistance in locating your position, you must have an operative VHF

A) transmitter and receiver.

B) transmitter and receiver, and an operative ADF receiver.

C) transmitter and receiver, and an operative VOR receiver.

50. H1276 COM

When planning for an emergency landing at night, one of the primary considerations should include

A) turning off all electrical switches to save battery power for the landing.

B) selecting a landing area close to public access, if possible.

C) landing without flaps to ensure a nose-high landing attitude at touchdown.

51. J27 COM

With respect to vortex circulation, which is true?

A) Helicopters generate downwash turbulence, not vortex circulation.

B) The vortex strength is greatest when the generating aircraft is flying fast.

C) Vortex circulation generated by helicopters in forward flight trail behind in a manner similar to wingtip vortices generated by airplanes.

52. J27 COM

When landing behind a large aircraft, which procedure should be followed for vortex avoidance?

A) Stay above its final approach flightpath all the way to touchdown.

B) Stay below and to one side of its final approach flightpath.

C) Stay well below its final approach flightpath and land at least 2,000 feet behind.

53. J27 COM

To avoid possible wake turbulence from a large jet aircraft that has just landed prior to your takeoff, at which point on the runway should you plan to become airborne?

A) Past the point where the jet touched down.

B) At the point where the jet touched down, or just prior to this point.

C) Approximately 500 feet prior to the point where the jet touched down.

54. J27 COM

Which procedure should you follow to avoid wake turbulence if a large jet crosses your course from left to right approximately 1 mile ahead and at your altitude?

A) Make sure you are slightly above the path of the jet.

B) Slow your airspeed to VA and maintain altitude and course.

C) Make sure you are slightly below the path of the jet and perpendicular to the course.

55. J27 COM

During a takeoff made behind a departing large jet airplane, the pilot can minimize the hazard of wingtip vortices by

A) being airborne prior to reaching the jet's flightpath until able to turn clear of its wake.

B) maintaining extra speed on takeoff and climbout.

C) extending the takeoff roll and not rotating until well beyond the jet's rotation point.

56. L05 COM

When a pilot recognizes a hazardous thought, he or she then should correct it by stating the corresponding antidote. Which of the following is the antidote for MACHO?

A) Follow the rules. They are usually right.

B) Not so fast. Think first.

C) Taking chances is foolish.

57. L05 COM

What are some of the hazardous attitudes dealt with in Aeronautical Decision Making (ADM)?

A) Risk management, stress management, and risk elements.

B) Poor decision making, situational awareness, and judgment.

C) Antiauthority (don't tell me), impulsivity (do something quickly without thinking), macho (I can do it).

58. L05 COM

When a pilot recognizes a hazardous thought, he or she then should correct it by applying the corresponding antidote. Which of the following is the antidote for the ANTIAUTHORITY/DON'T TELL ME hazardous attitude?

A) It won't happen to me. It could happen to me.

B) Not so fast. Think first.

C) Follow the rules. They are usually right.

59. L05 COM

The basic drive for a pilot to demonstrate the 'right stuff' can have an adverse effect on safety, by

A) a total disregard for any alternative course of action.

B) generating tendencies that lead to practices that are dangerous, often illegal, and that may lead to a mishap.

C) imposing a realistic assessment of piloting skills under stressful conditions.

60. L05 COM

Most pilots have fallen prey to dangerous tendencies or behavior problems at some time. Some of these dangerous tendencies or behavior patterns which must be identified and eliminated include:

A) Deficiencies in instrument skills and knowledge of aircraft systems or limitations.

B) Peer pressure, get-there-itis, loss of positional or situation awareness, and operating without adequate fuel reserves.

C) Performance deficiencies from human factors such as, fatigue, illness or emotional problems.

61. L05 COM

An early part of the Aeronautical Decision Making (ADM) process involves

A) taking a self-assessment hazardous attitude inventory test.

B) understanding the drive to have the 'right stuff.'

C) obtaining proper flight instruction and experience during training.

62. L05 COM

What is the first step in neutralizing a hazardous attitude in the ADM process?

A) Dealing with improper judgment.

B) Recognition of hazardous thoughts.

C) Recognition of invulnerability in the situation.

63. L05 COM

The Aeronautical Decision Making (ADM) process identifies the steps involved in good decision making. One of these steps includes a pilot

A) identifying personal attitudes hazardous to safe flight.

B) developing the 'right stuff' attitude.

C) making a rational evaluation of the required actions.

64. L05 COM

The passengers for a charter flight have arrived almost an hour late for a flight that requires a reservation. Which of the following alternatives best illustrates the ANTIAUTHORITY reaction?

A) Those reservation rules do not apply to this flight.

B) The pilot can't help it that the passengers are late.

C) If the pilot hurries, he or she may still make it on time.

65. L05 COM

While conducting an operational check of the cabin pressurization system, the pilot discovers that the rate control feature is inoperative. He knows that he can manually control the cabin pressure, so he elects to disregard the discrepancy. Which of the following alternatives best illustrates the INVULNERABILITY reaction?

A) It's too late to fix it now.

B) He can handle a little problem like this.

C) What is the worst that could happen.

66. L05 COM

Examples of classic behavioral traps that experienced pilots may fall into are: trying to

A) assume additional responsibilities and assert PIC authority.

B) promote situational awareness and then necessary changes in behavior.

C) complete a flight as planned, please passengers, meet schedules, and demonstrate the 'right stuff.'

67. L05 COM

While on an IFR flight, a pilot emerges from a cloud to find himself within 300 feet of a helicopter. Which of the following alternatives best illustrates the 'MACHO' reaction?

A) He is not too concerned; everything will be alright.

B) He flies a little closer, just to show him.

C) He quickly turns away and dives, to avoid collision.

68. L05 COM

A pilot and friends are going to fly to an out-of-town football game. When the passengers arrive, the pilot determines that they will be over the maximum gross weight for takeoff with the existing fuel load. Which of the following alternatives best illustrates the RESIGNATION reaction?

A) He can't wait around to de-fuel, they have to get there on time.

B) Well, nobody told him about the extra weight.

C) Weight and balance is a formality forced on pilots by the FAA.

69. L05 COM

Which of the following is the final step of the Decide Model for effective risk management and Aeronautical Decision Making?

A) Estimate.

B) Eliminate.

C) Evaluate.

70. L05 COM

The Decide Model is comprised of a 6-step process to provide a pilot a logical way of approaching Aeronautical Decision Making. These steps are:

A) Detect, estimate, choose, identify, do, and evaluate.

B) Determine, eliminate, choose, identify, detect, and evaluate.

C) Determine, evaluate, choose, identify, do, and eliminate.

71. L05 COM

Aeronautical Decision Making (ADM) is a

A) mental process of analyzing all information in a particular situation and making a timely decision on what action to take.

B) systematic approach to the mental process used by pilots to consistently determine the best course of action for a given set of circumstances.

C) decision making process which relies on good judgment to reduce risks associated with each flight.

72. L05 COM

Which of the following is the first step of the Decide Model for effective risk management and Aeronautical Decision Making?

A) Identify.

B) Detect.

C) Evaluate.

73. L05 COM

What does good cockpit stress management begin with?

A) Knowing what causes stress.

B) Good life stress management.

C) Eliminating life and cockpit stress issues.

74. L05 COM

To help manage cockpit stress, pilots must

A) condition themselves to relax and think rationally when stress appears.

B) be aware of life stress situations that are similar to those in flying.

C) avoid situations that will improve their abilities to handle cockpit responsibilities.

75. J31 COM

Which is true regarding the presence of alcohol within the human body?

A) A small amount of alcohol increases vision acuity.

B) An increase in altitude decreases the adverse effect of alcohol.

C) Judgment and decision-making abilities can be adversely affected by even small amounts of alcohol.

76. J31 COM

Hypoxia is the result of which of these conditions?

A) Excessive oxygen in the bloodstream.

B) Insufficient oxygen reaching the brain.

C) Excessive carbon dioxide in the bloodstream.

77. J31 COM

Hypoxia susceptibility due to inhalation of carbon monoxide increases as

A) humidity decreases.

B) altitude increases.

C) oxygen demand increases.

78. H1400 COM

What does the absence of the procedure turn barb on the plan view on an approach chart indicate?

A) A procedure turn is not authorized.

B) Teardrop-type procedure turn is authorized.

C) Racetrack-type procedure turn is authorized.

79. J16 COM

Which is true regarding the use of a Instrument Departure Procedure (DP) chart?

A) At airfields where DP's have been established, DP usage is mandatory for IFR departures.

B) To use a DP, the pilot must possess at least the textual description of the approved standard departure.

C) To use a DP, the pilot must possess both the textual and graphic form of the approved standard departure.

80. J35 COM

(Refer to figure 55) En route on V468 from BTG VORTAC to YKM VORTAC, the minimum en route altitude at TROTS intersection is

A) 7,100 feet.

B) 10,000 feet.

C) 11,500 feet.

81. J15 COM

For IFR operations off established airways, ROUTE OF FLIGHT portion of an IFR flight plan should list VOR navigational aids which are no more than

A) 40 miles apart.

B) 70 miles apart.

C) 80 miles apart.

82. H983 COM

An airplane descends to an airport under the following conditions:

| | |
|---|---|
| Cruising altitude | 6,500 ft |
| Airport elevation | 700 ft |
| Descends to | 800 ft AGL |
| Rate of descent | 500 ft/min |
| Average true airspeed | 110 kts |
| True course | 335° |
| Average wind velocity | 060° at 15 kts |
| Variation | 3°W |
| Deviation | +2° |

| | |
|---|---|
| Average fuel consumption | 8.5 gal/hr |

Determine the approximate time, compass heading, distance, and fuel consumed during the descent.

A) 10 minutes, 348°, 18 NM, 1.4 gallons.

B) 10 minutes, 355°, 17 NM, 2.4 gallons.

C) 12 minutes, 346°, 18 NM, 1.6 gallons.

83. H983 COM

You have flown 52 miles, are 6 miles off course, and have 118 miles yet to fly. To converge on your destination, the total correction angle would be

A) 3°.

B) 6°.

C) 10°.

84. H982 COM

GIVEN:

| | |
|---|---|
| True course | 105° |
| True heading | 085° |
| True airspeed | 95 kts |
| Groundspeed | 87 kts |

Determine the wind direction and speed.

A) 020° and 32 knots.

B) 030° and 38 knots.

C) 200° and 32 knots.

85. H981 COM

True course measurements on a Sectional Aeronautical Chart should be made at a meridian near the midpoint of the course because the

A) values of isogonic lines change from point to point.

B) angles formed by isogonic lines and lines of latitude vary from point to point.

C) angles formed by lines of longitude and the course line vary from point to point.

86. J37 COM

(Refer to figure 52, point 6) Mosier Airport is

A) an airport restricted to use by private and recreational pilots.

B) a restricted military stage field within restricted airspace.

C) a nonpublic use airport.

87. J37 COM

Which is true concerning the blue and magenta colors used to depict airports on Sectional Aeronautical Charts?

A) Airports with control towers underlying Class A, B, and C airspace are shown in blue, Class D and E airspace are magenta.

B) Airports with control towers underlying Class C, D, and E airspace are shown in magenta.

C) Airports with control towers underlying Class B, C, D, and E airspace are shown in blue.

88. J37 COM

(Refer to figure 53, point 1) This thin black shaded line is most likely

A) an arrival route.

B) a military training route.

C) a state boundary line.

89. J37 COM

(Refer to figure 53, point 2) The 16 indicates

A) an antenna top at 1,600 feet AGL.

B) the maximum elevation figure for that quadrangle.

C) the minimum safe sector altitude for that quadrangle.

90. J37 COM

(Refer to figure 54, point 6) The Class C airspace at Metropolitan Oakland International (OAK) which extends from the surface upward has a ceiling of

A) both 2,100 feet and 3,000 feet MSL.

B) 8,000 feet MSL.

C) 2,100 feet AGL.

91. J37 COM

(Refer to figure 52, point 4) The terrain at the obstruction approximately 8 NM east southeast of the Lincoln Airport is approximately how much higher than the airport elevation?

A) 376 feet.

B) 835 feet.

C) 1,135 feet.

92. H989 COM

The ADF is tuned to a radiobeacon. If the magnetic heading is 040° and the relative bearing is 290°, the magnetic bearing TO that radiobeacon would be

A) 150°.

B) 285°.

C) 330°.

93. H983 COM

If the relative bearing changes from 090° to 100° in 2.5 minutes of elapsed time, the time to the station would be

A) 12 minutes.

B) 15 minutes.

C) 18 minutes.

94. H983 COM

GIVEN:

| | |
|---|---|
| Wingtip bearing change | 5° |
| Time elapsed between bearing change | 5 min |
| True airspeed | 115 kts |

The distance to the station is

A) 36 NM.

B) 57.5 NM.

C) 115 NM.

95. H831 COM

(Refer to figure 20.) Using instrument group 3, if the aircraft makes a 180° turn to the left and continues straight ahead, it will intercept which radial?

A) 135 radial.

B) 270 radial.

C) 360 radial.

96. J01 COM

When using VOT to make a VOR receiver check, the CDI should be centered and the OBS should indicate that the aircraft is on the

A) 090 radial.

B) 180 radial.

C) 360 radial.

97. J35 COM

(Refer to figure 55) En route on V448 from YKM VORTAC to BTG VORTAC, what minimum navigation equipment is required to identify ANGOO intersection?

A) One VOR receiver.

B) One VOR receiver and DME.

C) Two VOR receivers.

98. H989 COM

To track outbound on the 180 radial of a VOR station, the recommended procedure is to set the OBS to

A) 360° and make heading corrections toward the CDI needle.

B) 180° and make heading corrections away from the CDI needle.

C) 180° and make heading corrections toward the CDI needle.

99. H989 COM

To track inbound on the 215 radial of a VOR station, the recommended procedure is to set the OBS to

A) 215° and make heading corrections toward the CDI needle.

B) 215° and make heading corrections away from the CDI needle.

C) 035° and make heading corrections toward the CDI needle.

100. H989 COM

Which situation would result in reverse sensing of a VOR receiver?

A) Flying a heading that is reciprocal to the bearing selected on the OBS.

B) Setting the OBS to a bearing that is 90° from the bearing on which the aircraft is located.

C) Failing to change the OBS from the selected inbound course to the outbound course after passing the station.

101. A02 COM

14 CFR part 1 defines $V_{NE}$ as

A) maximum landing gear extended speed.

B) never-exceed speed.

C) maximum nose wheel extend speed.

102. A02 COM

Which is the correct symbol for the stalling speed or the minimum steady flight speed at which the airplane is controllable?

A) VS.

B) VS1.

C) VSO.

103. A02 COM

14 CFR part 1 defines $V_{NO}$ as

A) normal operating speed.

B) maximum structural cruising speed.

C) maximum operating speed.

104. A02 COM

14 CFR part 1 defines $V_F$ as

A) design flap speed.

B) flap operating speed.

C) maximum flap extended speed.

105. A01 COM

Regulations which refer to 'commercial operators' relate to that person who

A) is the owner of a small scheduled airline.

B) for compensation or hire, engages in the carriage by aircraft in air commerce of persons or property, as an air carrier.

C) for compensation or hire, engages in the carriage by aircraft in air commerce of persons or property, other than as an air carrier.

106. A01 COM

Regulations which refer to 'operate' relate to that person who

A) acts as pilot in command of the aircraft.

B) is the sole manipulator of the aircraft controls.

C) causes the aircraft to be used or authorizes its use.

107. A01 COM

Regulations which refer to the 'operational control' of a flight are in relation to

A) the specific duties of any required crewmember.

B) acting as the sole manipulator of the aircraft controls.

C) exercising authority over initiating, conducting, or terminating a flight.

108. A02 COM

Which is the correct symbol for the stalling speed or the minimum steady flight speed in a specified configuration?

A) VS.

B) VS1.

C) VSO.

109. A20 COM

Which of the following are considered aircraft class ratings?

A) Transport, normal, utility, and acrobatic.

B) Airplane, rotorcraft, glider, and lighter-than-air.

C) Single-engine land, multiengine land, single-engine sea, and multiengine sea.

110. A20 COM

To act as pilot in command of an airplane that is equipped with retractable landing gear, flaps, and controllable-pitch propeller, a person is required to

A) hold a multiengine airplane class rating.

B) make at least six takeoffs and landings in such an airplane within the preceding 6 months.

C) receive and log ground and flight training in such an airplane, and obtain a logbook endorsement certifying proficiency.

111. A20 COM

Pilots, who change their permanent mailing address, and fail to notify the FAA Airmen Certification Branch of this change, are entitled to exercise the privileges of their pilot certificate for a period of

A) 30 days.

B) 60 days.

C) 90 days.

112. A20 COM

A pilot convicted of operating an aircraft as a crewmember under the influence of alcohol, or using drugs that affect the person`s faculties, is grounds for a

A) denial of an application for an FAA certificate, rating, or authorization issued under 14 CFR part 61.

B) written notification to the FAA Civil Aeromedical Institute (CAMI) within 60 days after the conviction.

C) written report to be filed with the FAA Civil Aviation Security Division (AMC-700) not later than 60 days after the conviction.

113. A20 COM

A pilot convicted for the violation of any Federal or State statute relating to the process, manufacture, transportation, distribution, or sale of narcotic drugs is grounds for

A) a written report to be filed with the FAA Civil Aviation Security Division (AMC-700) not later than 60 days after the conviction.

B) notification of this conviction to the FAA Civil Aeromedical Institute (CAMI) within 60 days after the conviction.

C) suspension or revocation of any certificate, rating, or authorization issued under 14 CFR part 61.

114. A20 COM

A pilot convicted of a motor vehicle offense involving alcohol or drugs is required to provide a written report to the

A) nearest FAA Flight Standards District Office (FSDO) within 60 days after such action.

B) FAA Civil Aeromedical Institute (CAMI) within 60 days after the conviction.

C) FAA Civil Aviation Security Division (AMC-700) within 60 days after such action.

115. A21 COM

To act as pilot in command of an aircraft operated under 14 CFR part 91, a commercial pilot must have satisfactorily accomplished a flight review or completed a proficiency check within the preceding

A) 6 calendar months.

B) 12 calendar months.

C) 24 calendar months.

116. A21 COM

To act as pilot in command of an airplane towing a glider, a pilot must have accomplished, within the preceding 12 months, at least

A) three actual glider tows under the supervision of a qualified tow pilot.

B) ten flights as pilot in command of an aircraft while towing a glider.

C) three actual or simulated glider tows while accompanied by a qualified tow pilot.

117. A20 COM

What flight time may a pilot log as second in command?

A) All flight time while acting as second in command in aircraft configured for more than one pilot.

B) Only that flight time during which the second in command is the sole manipulator of the controls.

C) All flight time when qualified and occupying a crewmember station in an aircraft that requires more than one pilot.

118. A20 COM

What flight time must be documented and recorded by a pilot exercising the privileges of a commercial certificate?

A) All flight time flown for compensation or hire.

B) Only flight time for compensation or hire with passengers aboard which is necessary to meet the recent flight experience requirements.

C) Flight time showing training and aeronautical experience to meet requirements for a certificate, rating or flight review.

119. A20 COM

A second-class medical certificate issued to a commercial pilot on April 10, this year, permits the pilot to exercise which of the following privileges?

A) Commercial pilot privileges through April 30, next year.

B) Commercial pilot privileges through April 10, 2 years later.

C) Private pilot privileges through, but not after, March 31, next year.

120. A21 COM

If a pilot does not meet the recency of experience requirements for night flight and official sunset is 1900 CST, the latest time passengers should be carried is

A) 1800 CST.

B) 1959 CST.

C) 1900 CST.

121. A21 COM

Prior to carrying passengers at night, the pilot in command must have accomplished the required takeoffs and landings in

A) any category aircraft.

B) the same category and class of aircraft to be used.

C) the same category, class, and type of aircraft (if a type rating is required).

122. A21 COM

Does a commercial pilot certificate have a specific expiration date?

A) No, it is issued without a specific expiration date.

B) Yes, it expires at the end of the 24th month after the month in which it was issued.

C) No, but commercial privileges expire if a flight review is not satisfactorily completed each 12 months.

123. A24 COM

What limitation is imposed on a newly certificated commercial pilot - airplane, if that person does not hold an instrument rating? The carriage of passengers

A) or property for hire on cross-country flights at night is limited to a radius of 50 NM.

B) for hire on cross-country flights is limited to 50 NM for night flights, but not limited for day flights.

C) for hire on cross-country flights in excess of 50 NM, or for hire at night is prohibited.

124. A20 COM

To serve as pilot in command of an airplane that is certified for more than one pilot crewmember, and operated under part 91, a person must

A) complete a flight review within the preceding 24 calendar months.

B) receive and log ground and flight training from an authorized flight instructor.

C) complete a pilot-in-command proficiency check within the preceding 12 calendar months in an airplane that is type certificated for more than one pilot.

125. A20 COM

When is the pilot in command required to hold a category and class rating appropriate to the aircraft being flown?

A) On flights when carrying another person.

B) All solo flights.

C) On practical tests given by an examiner or FAA Inspector.

126. A20 COM

Commercial pilots are required to have a valid and appropriate pilot certificate in their physical possession or readily accessible in the aircraft when

A) piloting for hire only.

B) acting as pilot in command.

C) carrying passengers only.

127. A21 COM

No pilot may act as pilot in command of an aircraft under IFR or in weather conditions less than the minimums prescribed for VFR unless that pilot has, within the past 6 months, performed and logged under actual or simulated instrument conditions, at least

A) three instrument approaches and logged 3 hours of instruments.

B) six instrument flights and six approaches.

C) six instrument approaches, holding procedures, intercepting and tracking courses, or passed an instrument proficiency check in an aircraft that is appropriate to the aircraft category.

128. A24 COM

A person with a commercial pilot certificate may act as pilot in command of an aircraft carrying persons or property for compensation or hire, if that person

A) holds appropriate category, class ratings, and meets the recent flight experience requirements of 14 CFR part 61.

B) is qualified in accordance with 14 CFR part 61 and with the applicable parts that apply to the operation.

C) is qualified in accordance with 14 CFR part 61 and has passed a pilot competency check given by an authorized check pilot.

129. A24 COM

A person with a Commercial Pilot certificate may act as pilot in command of an aircraft for compensation or hire, if that person

A) holds appropriate category, class ratings, and meets the recent flight experience requirements of 14 CFR part 61.

B) is qualified in accordance with 14 CFR part 61 and has passed a pilot competency check given by an authorized check pilot.

C) is qualified in accordance with 14 CFR part 61 and with the applicable parts that apply to the operation.

130. A21 COM

To act as pilot in command of a tailwheel airplane, without prior experience, a pilot must

A) log ground and flight training from an authorized instructor.

B) receive and log flight training from an authorized instructor as well as receive a logbook endorsement from an authorized instructor who finds the person proficient in a tailwheel airplane.

C) pass a competency check and receive an endorsement from an authorized instructor.

131. A21 COM

Unless otherwise authorized, the pilot in command is required to hold a type rating when operating any

A) aircraft that is certificated for more than one pilot.

B) aircraft of more than 12,500 pounds maximum certificated takeoff weight.

C) multiengine airplane having a gross weight of more than 12,000 pounds.

132. B11 COM

A coded transponder equipped with altitude reporting equipment is required for

1. Class A, Class B, and Class C airspace areas.

2. all airspace of the 48 contiguous U.S. and District of Columbia at and above 10,000 feet MSL (including airspace at and below 2,500 feet above the surface).

A) 1.

B) 2.

C) Both 1 and 2.

133. B11 COM

The maximum cumulative time that an emergency locator transmitter may be operated before the rechargeable battery must be recharged is

A) 30 minutes.

B) 45 minutes.

C) 60 minutes.

134. B08 COM

Required flight crewmembers' safety belts must be fastened

A) only during takeoff and landing.

B) while the crewmembers are at their stations.

C) only during takeoff and landing when passengers are aboard the aircraft.

135. B11 COM

Which is required equipment for powered aircraft during VFR night flights?

A) Flashlight with red lens, if the flight is for hire.

B) An electric landing light, if the flight is for hire.

C) Sensitive altimeter adjustable for barometric pressure.

136. B08 COM

Which is true with respect to formation flights? Formation flights are

A) authorized when carrying passengers for hire, with prior arrangement with the pilot in command of each aircraft in the formation.

B) not authorized, except by arrangement with the pilot in command of each aircraft.

C) not authorized, unless the pilot in command of each aircraft is trained and found competent in formation.

137. B08 COM

Two aircraft of the same category are approaching an airport for the purpose of landing. The right-of-way belongs to the aircraft

A) at the higher altitude.

B) at the lower altitude, but the pilot shall not take advantage of this rule to cut in front of or to overtake the other aircraft.

C) that is more maneuverable, and that aircraft may, with caution, move in front of or overtake the other aircraft.

138. B08 COM

An airplane is overtaking a helicopter. Which aircraft has the right-of-way?

A) Airplane; the airplane pilot should alter course to the left to pass.

B) Helicopter; the pilot should expect to be passed on the right.

C) Helicopter; the pilot should expect to be passed on the left.

139. B11 COM

What transponder equipment is required for airplane operations within Class B airspace? A transponder

A) with 4096 code or Mode S, and Mode C capability.

B) is required for airplane operations when visibility is less than 3 miles.

C) with 4096 code capability is required except when operating at or below 1,000 feet AGL under the terms of a letter of agreement.

140. B08 COM

Unless otherwise authorized or required by ATC, the maximum indicated airspeed permitted when at or below 2,500 feet AGL within 4 NM of the primary airport within Class C or D airspace is

A) 180 knots.

B) 200 knots.

C) 230 knots.

141. B12 COM

What is the minimum altitude and flight visibility required for acrobatic flight?

A) 1,500 feet AGL and 3 miles.

B) 2,000 feet MSL and 2 miles.

C) 3,000 feet AGL and 1 mile.

142. B11 COM

If not equipped with required position lights, an aircraft must terminate flight

A) at sunset.

B) 30 minutes after sunset.

C) 1 hour after sunset.

143. B08 COM

What altimeter setting is required when operating an aircraft at 18,000 feet MSL?

A) Current reported altimeter setting of a station along the route.

B) Altimeter setting at the departure or destination airport.

C) 29.92 Inches Hg.

144. B08 COM

Airplane A is overtaking airplane B. Which airplane has the right-of-way?

A) Airplane A; the pilot should alter course to the right to pass.

B) Airplane B; the pilot should expect to be passed on the right.

C) Airplane B; the pilot should expect to be passed on the left.

145. B12 COM

Which is true with respect to operating limitations of a 'restricted' category airplane?

A) A 'restricted' category airplane is limited to an operating radius of 25 miles from its home base.

B) A pilot of a 'restricted' category airplane is required to hold a commercial pilot certificate.

C) No person may operate a 'restricted' category airplane carrying passengers or property for compensation or hire.

146. B10 COM

What is the maximum bearing error (+ or -) allowed for an operational VOR equipment check when using an FAA-approved ground test signal?

A) 4 degrees.

B) 6 degrees.

C) 8 degrees.

147. B11 COM

In accordance with14 CFR part 91, supplemental oxygen must be used by the required minimum flightcrew for that time exceeding 30 minutes while at cabin pressure altitudes of

A) 10,500 feet MSL up to and including 12,500 feet MSL.

B) 12,000 feet MSL up to and including 18,000 feet MSL.

C) 12,500 feet MSL up to and including 14,000 feet MSL.

148. B11 COM

Which is required equipment for powered aircraft during VFR night flights?

A) Anticollision light system.

B) Gyroscopic direction indicator.

C) Gyroscopic bank-and-pitch indicator.

149. B08 COM

Which is true with respect to operating near other aircraft in flight? They are

A) authorized when carrying passengers for hire, with prior arrangement with the pilot in command of each aircraft in the formation.

B) not authorized, when operated so close to another aircraft they can create a collision hazard.

C) not authorized, unless the pilot in command of each aircraft is trained and found competent in formation.

150. B12 COM

The carriage of passengers for hire by a commercial pilot is

A) not authorized in a 'limited' category aircraft.

B) not authorized in a 'utility' category aircraft.

C) authorized in 'restricted' category aircraft.

151. B07 COM

No person may operate a large civil aircraft of U.S. registry which is subject to a lease, unless the lessee has mailed a copy of the lease to the FAA Aircraft Registration Branch, Technical Section, Oklahoma City, OK, within how many hours of its execution?

A) 24.

B) 48.

C) 72.

152. B08 COM

The minimum flight visibility for VFR flight increases to 5 statute miles beginning at an altitude of

A) 14,500 feet MSL.

B) 10,000 feet MSL if above 1,200 feet AGL.

C) 10,000 feet MSL regardless of height above ground.

153. B11 COM

Approved flotation gear, readily available to each occupant, is required on each aircraft if it is being flown for hire over water,

A) in amphibious aircraft beyond 50 NM from shore.

B) beyond power-off gliding distance from shore.

C) more than 50 statute miles from shore.

154. B13 COM

An ATC transponder is not to be used unless it has been tested, inspected, and found to comply with regulations within the preceding

A) 30 days.

B) 12 calendar months.

C) 24 calendar months.

155. B13 COM

Aircraft maintenance records must include the current status of the

A) applicable airworthiness certificate.

B) life-limited parts of only the engine and airframe.

C) life-limited parts of each airframe, engine, propeller, rotor, and appliance.

156. B13 COM

A new maintenance record being used for an aircraft engine rebuilt by the manufacturer must include previous

A) operating hours of the engine.

B) annual inspections performed on the engine.

C) changes as required by Airworthiness Directives.

157. B08 COM

Operating regulations for U.S.-registered civil airplanes require that during movement on the surface, takeoffs, and landings, a seat belt and shoulder harness (if installed) must be properly secured about each

A) person on board.

B) flight crewmember only.

C) flight and cabin crewmembers.

158. B08 COM

If the minimum safe speed for any particular operation is greater than the maximum speed prescribed in 14 CFR part 91, the

A) operator must have a Letter of Agreement with ATC.

B) operator must have a Memorandum of Agreement (MOA) with the controlling agency.

C) aircraft may be operated at that speed.

159. B10 COM

Except when necessary for takeoff or landing or unless otherwise authorized by the Administrator, the minimum altitude for IFR flight is

A) 2,000 feet over all terrain.

B) 3,000 feet over designated mountainous terrain; 2,000 feet over terrain elsewhere.

C) 2,000 feet above the highest obstacle over designated mountainous terrain; 1,000 feet above the highest obstacle over terrain elsewhere.

160. B08 COM

What is the minimum flight visibility and proximity to cloud requirements for VFR flight, at 6,500 feet MSL, in Class C, D, and E airspace?

A) 1 mile visibility; clear of clouds.

B) 3 miles visibility; 1,000 feet above and 500 feet below.

C) 5 miles visibility; 1,000 feet above and 1,000 feet below.

161. B09 COM

When operating an airplane for the purpose of takeoff or landing within Class D airspace under special VFR, what minimum distance from clouds and what visibility are required?

A) Remain clear of clouds, and the ground visibility must be at least 1 SM.

B) 500 feet beneath clouds, and the ground visibility must be at least 1 SM.

C) Remain clear of clouds, and the flight visibility must be at least 1 NM.

162. B13 COM

Which is true concerning required maintenance inspections?

A) A 100-hour inspection may be substituted for an annual inspection.

B) An annual inspection may be substituted for a 100-hour inspection.

C) An annual inspection is required even if a progressive inspection system has been approved.

163. B09 COM

VFR cruising altitudes are required to be maintained when flying

A) at 3,000 feet or more AGL, based on true course.

B) more than 3,000 feet AGL, based on magnetic course.

C) at 3,000 feet or more above MSL, based on magnetic heading.

164. B13 COM

Who is primarily responsible for maintaining an aircraft in an airworthy condition?

A) The lead mechanic responsible for that aircraft.

B) Pilot in command or operator.

C) Owner or operator of the aircraft.

165. B13 COM

Assuring compliance with an Airworthiness Directive is the responsibility of the

A) pilot in command and the FAA certificated mechanic assigned to that aircraft.

B) pilot in command of that aircraft.

C) owner or operator of that aircraft.

166. B13 COM

After an annual inspection has been completed and the aircraft has been returned to service, an appropriate notation should be made

A) on the airworthiness certificate.

B) in the aircraft maintenance records.

C) in the FAA-approved flight manual.

167. B13 COM

A standard airworthiness certificate remains in effect as long as the aircraft receives

A) an annual inspection.

B) an annual inspection and a 100-hour inspection prior to their expiration dates.

C) required maintenance and inspections.

168. B13 COM

If an aircraft's operation in flight was substantially affected by an alteration or repair, the aircraft documents must show that it was test flown and approved for return to service by an appropriately-rated pilot prior to being operated

A) under VFR or IFR rules.

B) with passengers aboard.

C) for compensation or hire.

169. B09 COM

To operate an airplane under SPECIAL VFR (SVFR) within Class D airspace at night, which is required?

A) The pilot must hold an instrument rating, but the airplane need not be equipped for instrument flight, as long as the weather will remain at or above SVFR minimums.

B) The Class D airspace must be specifically designated as a night SVFR area.

C) The pilot must hold an instrument rating, and the airplane must be equipped for instrument flight.

170. B11 COM

In the contiguous U.S., excluding the airspace at and below 2,500 feet AGL, an operable coded transponder equipped with Mode C capability is required in all airspace above

A) 10,000 feet MSL.

B) 12,500 feet MSL.

C) 14,500 feet MSL.

171. B08 COM

With U.S.-registered civil airplanes, the use of safety belts is required during movement on the surface, takeoffs, and landings for

A) each person over 2 years of age on board.

B) commercial passenger operations only.

C) safe operating practice, but not required by regulations.

172. B08 COM

When is preflight action required, relative to alternatives available, if the planned flight cannot be completed?

A) IFR flights only.

B) Any flight not in the vicinity of an airport.

C) Any flight conducted for compensation or hire.

173. B08 COM

The required preflight action relative to weather reports and fuel requirements is applicable to

A) IFR flights only.

B) any flight not in the vicinity of an airport.

C) any flight conducted for compensation or hire.

174. B07 COM

When operating a U.S.-registered civil aircraft, which document is required by regulation to be available in the aircraft?

A) A manufacturer's Operations Manual.

B) A current, approved Airplane Flight Manual.

C) An Owner's Manual.

175. B08 COM

Each required flight crewmember is required to keep his or her shoulder harness fastened

A) during takeoff and landing, unless he or she is unable to perform required duties.

B) while the crewmembers are at their stations, unless he or she is unable to perform required duties.

C) during takeoff and landing only when passengers are aboard the aircraft.

176. B12 COM

Which is required to operate an aircraft towing an advertising banner?

A) Approval from ATC to operate in Class E airspace.

B) A certificate of waiver issued by the Administrator.

C) A safety link at each end of the towline which has a breaking strength not less than 80 percent of the aircraft's gross weight.

177. B07 COM

Portable electronic devices which may cause interference with the navigation or communication system may not be operated on U.S.-registered civil aircraft being operated

A) along Federal airways.

B) under IFR.

C) in passenger carrying operations.

178. B07 COM

A pilot in command (PIC) of a civil aircraft may not allow any object to be dropped from that aircraft in flight

A) if it creates a hazard to persons and property.

B) unless the PIC has permission to drop any object over private property.

C) unless reasonable precautions are taken to avoid injury to property.

179. B07 COM

What action must be taken when a pilot in command deviates from any rule in 14 CFR part 91?

A) Upon landing, report the deviation to the nearest FAA Flight Standards District Office.

B) Advise ATC of the pilot in command's intentions.

C) Upon the request of the Administrator, send a written report of that deviation to the Administrator.

180. B07 COM

Who is responsible for determining if an aircraft is in condition for safe flight?

A) A certificated aircraft mechanic.

B) The pilot in command.

C) The owner or operator.

181. B08 COM

After an ATC clearance has been obtained, a pilot may not deviate from that clearance, unless the pilot

A) receives an amended clearance or has an emergency.

B) is operating VFR on top.

C) requests an amended clearance.

182. B10 COM

Which data must be recorded in the aircraft logbook or other record by a pilot making a VOR operational check for IFR operations?

A) VOR name or identification, amount of bearing error, date of check, and signature.

B) Date of check, place of operational check, bearing error, and signature.

C) VOR name or identification, place of operational check, amount of bearing error, and date of check.

183. J13 COM

Pilots are required to have the anti-collision light system operating

A) during all types of operations, both day and night.

B) anytime the pilot is in the cockpit.

C) anytime an engine is in operation.

184. B08 COM

A pilot flying a single-engine airplane observes a multiengine airplane approaching from the left. Which pilot should give way?

A) Each pilot should alter course to the right.

B) The pilot of the single-engine airplane should give way; the other airplane is to the left.

C) The pilot of the multiengine airplane should give way; the single-engine airplane is to its right.

185. B11 COM

What are the oxygen requirements when operating at cabin pressure altitudes above 15,000 feet MSL?

A) Oxygen must be available for the flightcrew.

B) Oxygen is not required at any altitude in a balloon.

C) The flightcrew and passengers must be provided with supplemental oxygen.

186. G13 COM

The operator of an aircraft that has been involved in an incident is required to submit a report to the nearest field office of the NTSB

A) within 7 days.

B) within 10 days.

C) only if requested to do so.

187. G10 COM

Notification to the NTSB is required when there has been substantial damage

A) which requires repairs to landing gear.

B) to an engine caused by engine failure in flight.

C) which adversely affects structural strength or flight characteristics.

188. G11 COM

NTSB Part 830 requires an immediate notification as a result of which incident?

A) Engine failure for any reason during flight.

B) Damage to the landing gear as a result of a hard landing.

C) Any required flight crewmember being unable to perform flight duties because of illness.

189. G11 COM

Which airborne incident would require that the nearest NTSB field office be notified immediately?

A) Cabin door opened in-flight.

B) Flight control system malfunction or failure.

C) Cargo compartment door malfunction or failure.

190. G11 COM

When should notification of an aircraft accident be made to the NTSB if there was substantial damage and no injuries?

A) Immediately.

B) Within 10 days.

C) Within 30 days.

191. G13 COM

How many days after an accident is a report required to be filed with the nearest NTSB field office?

A) 2.

B) 7.

C) 10.

192. G11 COM

During flight a fire, which was extinguished, burned the insulation from a transceiver wire. What action is required by regulations?

A) An immediate notification by the operator of the aircraft to the nearest NTSB field office.

B) A report must be filed with the avionics inspector at the nearest FAA Flight Standards District Office within 48 hours.

C) No notification or report is required.

193. H962 COM

Terminal Aerodrome Forecasts (TAF) are issued how many times a day and cover what period of time?

A) Four times daily and are usually valid for a 24 hour period.

B) Six times daily and are usually valid for a 24 hour period including a 4-hour categorical outlook.

C) Four times daily and are valid for 12 hours including a 6-hour categorical outlook.

194. H957 COM

The visibility entry in a Terminal Aerodrome Forecast (TAF) of P6SM implies that the prevailing visibility is expected to be greater than

A) 6 nautical miles.

B) 6 statute miles.

C) 6 kilometers.

195. H962 COM

What does the contraction VRB in the Terminal Aerodrome Forecast (TAF) mean?

A) Wind speed is variable throughout the period.

B) Cloud base is variable.

C) Wind direction is variable.

196. J25 COM

What type of Inflight Weather Advisories provides an en route pilot with information regarding the possibility of moderate icing, moderate turbulence, winds of 30 knots or more at the surface and extensive mountain obscurement?

A) Convective SIGMETs and SIGMETs.

B) Severe Weather Forecast Alerts (AWW) and SIGMETs.

C) AIRMETs and Center Weather Advisories (CWA).

197. I57 COM

SIGMET's are issued as a warning of weather conditions which are hazardous

A) to all aircraft.

B) particularly to heavy aircraft.

C) particularly to light airplanes.

198. I57 COM

Which correctly describes the purpose of Convective SIGMET's (WST)?

A) They consist of an hourly observation of tornadoes, significant thunderstorm activity, and large hailstone activity.

B) They contain both an observation and a forecast of all thunderstorm and hailstone activity. The forecast is valid for 1 hour only.

C) They consist of either an observation and a forecast or just a forecast for tornadoes, significant thunderstorm activity, or hail greater than or equal to 3/4 inch in diameter.

199. J25 COM

Weather Advisory Broadcasts, including Severe Weather Forecast Alerts (AWW), Convective SIGMETs, and SIGMETs, are provided by

A) ARTCCs on all frequencies, except emergency, when any part of the area described is within 150 miles of the airspace under their jurisdiction.

B) AFSSs on 122.2 MHz and adjacent VORs, when any part of the area described is within 200 miles of the airspace under their jurisdiction.

C) selected low-frequency and/or VOR navigational aids.

200. I63 COM

What values are used for Winds Aloft Forecasts?

A) True direction and MPH.

B) True direction and knots.

C) Magnetic direction and knots.

201. H959 COM

En route Flight Advisory Service (EFAS) is a service that provides en route aircraft with timely and meaningful weather advisories pertinent to the type of flight intended, route, and altitude. This information is received by

A) listening to en route VORs at 15 and 45 minutes past the hour.

B) contacting flight watch, using the name of the ARTCC facility identification in your area, your aircraft identification, and name of nearest VOR, on 122.0 MHz below 17,500 feet MSL.

C) contacting the AFSS facility in your area, using your airplane identification, and the name of the nearest VOR.

202. I54 COM

The Hazardous Inflight Weather Advisory Service (HIWAS) is a broadcast service over selected VORs that provides

A) SIGMETs and AIRMETs at 15 minutes and 45 minutes past the hour for the first hour after issuance.

B) continuous broadcast of inflight weather advisories.

C) SIGMETs, CONVECTIVE SIGMETs and AIRMETs at 15 minutes and 45 minutes past the hour.

203. J25 COM

The station originating the following METAR observation has a field elevation of 3,500 feet MSL. If the sky cover is one continuous layer, what is the thickness of the cloud layer? (Top of overcast reported at 7,500 feet MSL).

METAR KHOB 151250Z 17006KT 4SM OVC005 13/11 A2998

A) 2,500 feet

B) 3 ,500 feet.

C) 4,000 feet.

204. J25 COM

The remarks section of the Aviation Routine Weather Report (METAR) contains the following coded information. What does it mean?

RMK FZDZB42 WSHFT 30 FROPA

A) Freezing drizzle with cloud bases below 4,200 feet.

B) Freezing drizzle below 4,200 feet and wind shear

C) Wind shift at three zero due to frontal passage.

205. H961 COM

What is meant by the Special METAR weather observation for KBOI?

SPECI KBOI 091854Z 32005KT 1 1/2SM RA BR OVC007 17/16 A2990 RMK RAB12

A) Rain and fog obscuring two-tenths of the sky; rain began at 1912Z.

B) Rain and mist obstructing visibility; rain began at 1812Z.

C) Rain and overcast at 1200 feet AGL.

206. H961 COM

Which is true concerning the radar weather report (SD) for KOKC?

KOKC 1934 LN 8TRW++/+ 86/40 164/60 199/115 15W L2425 MT 570 AT 159/65 2 INCH HAIL RPRTD THIS CELL

A) There are three cells with tops at 11,500, 40,000, and 60,000 feet.

B) The line of cells is moving 060° with winds reported up to 40 knots.

C) The maximum tops of the cells is 57,000 feet located 65 NM southeast of the station.

207. J25 COM

The Telephone Information Briefing Service (TIBS) provided by AFSSs includes

A) weather information service on a common frequency (122.0 mHz).

B) recorded weather briefing service for the local area, usually within 50 miles and route forecasts.

C) continuous recording of meteorological and/or aeronautical information available by telephone.

208. J25 COM

To obtain a continuous transcribed weather briefing including winds aloft and route forecasts for a cross-country flight, a pilot could monitor

A) a TWEB on a low-frequency and/or VOR receiver.

B) the regularly scheduled weather broadcast on a VOR frequency.

C) a high-frequency radio receiver tuned to En Route Flight Advisory Service.

209. I61 COM

What flight planning information can a pilot derive from Constant Pressure Analysis Charts?

A) Winds and temperatures aloft.

B) Clear air turbulence and icing conditions.

C) Frontal systems and obstructions to vision aloft.

210. I64 COM

What weather phenomenon is implied within an area enclosed by small scalloped lines on a U.S. High-Level Significant Weather Prognostic Chart?

A) Cirriform clouds, light to moderate turbulence, and icing.

B) Cumulonimbus clouds, icing, and moderate or greater turbulence.

C) Cumuliform or standing lenticular clouds, moderate to severe turbulence, and icing.

211. I64 COM

The U.S. High-Level Significant Weather Prognostic Chart forecasts significant weather for what airspace?

A) 18,000 feet to 45,000 feet.

B) 24,000 feet to 45,000 feet.

C) 24,000 feet to 63,000 feet.

212. I64 COM

Which weather chart depicts conditions forecast to exist at a specific time in the future?

A) Freezing Level Chart.

B) Weather Depiction Chart.

C) 12-Hour Significant Weather Prognostication Chart.

213. I64 COM

What is the upper limit of the Low Level Significant Weather Prognostic Chart?

A) 30,000 feet.

B) 24,000 feet.

C) 18,000 feet.

214. I60 COM

What information is provided by the Radar Summary Chart that is not shown on other weather charts?

A) Lines and cells of hazardous thunderstorms.

B) Ceilings and precipitation between reporting stations.

C) Areas of cloud cover and icing levels within the clouds.

215. I58 COM

On a Surface Analysis Chart, the solid lines that depict sea level pressure patterns are called

A) isobars.

B) isogons.

C) millibars.

216. I58 COM

Dashed lines on a Surface Analysis Chart, if depicted, indicate that the pressure gradient is

A) weak.

B) strong.

C) unstable.

217. I58 COM

Which chart provides a ready means of locating observed frontal positions and pressure centers?

A) Surface Analysis Chart.

B) Constant Pressure Analysis Chart.

C) Weather Depiction Chart.

218. I59 COM

Which provides a graphic display of both VFR and IFR weather?

A) Surface Weather Map.

B) Radar Summary Chart.

C) Weather Depiction Chart.

219. I59 COM

When total sky cover is few or scattered, the height shown on the Weather Depiction Chart is the

A) top of the lowest layer.

B) base of the lowest layer.

C) base of the highest layer.

220. I28 COM

Hazardous wind shear is commonly encountered

A) near warm or stationary frontal activity.

B) when the wind velocity is stronger than 35 knots.

C) in areas of temperature inversion and near thunderstorms.

221. I30 COM

Which is the best technique for minimizing the wing-load factor when flying in severe turbulence?

A) Change power settings, as necessary, to maintain constant airspeed.

B) Control airspeed with power, maintain wings level, and accept variations of altitude.

C) Set power and trim to obtain an airspeed at or below maneuvering speed, maintain wings level, and accept variations of airspeed and altitude.

222. I28 COM

When flying low over hilly terrain, ridges, or mountain ranges, the greatest potential danger from turbulent air currents will usually be encountered on the

A) leeward side when flying with a tailwind.

B) leeward side when flying into the wind.

C) windward side when flying into the wind.

223. H921 COM

A pilot is entering an area where significant clear air turbulence has been reported. Which action is appropriate upon encountering the first ripple?

A) Maintain altitude and airspeed.

B) Adjust airspeed to that recommended for rough air.

C) Enter a shallow climb or descent at maneuvering speed.

224. I28 COM

One of the most dangerous features of mountain waves is the turbulent areas in and

A) below rotor clouds.

B) above rotor clouds.

C) below lenticular clouds.

225. I28 COM

During an approach, the most important and most easily recognized means of being alerted to possible wind shear is monitoring the

A) amount of trim required to relieve control pressures.

B) heading changes necessary to remain on the runway centerline.

C) power and vertical velocity required to remain on the proper glidepath.

226. I28 COM

What is an important characteristic of wind shear?

A) It is present at only lower levels and exists in a horizontal direction.

B) It is present at any level and exists in only a vertical direction.

C) It can be present at any level and can exist in both a horizontal and vertical direction.

227. J25 COM

The Low Level Wind Shear Alert System (LLWAS) provides wind data and software process to detect the presence of a

A) rotating column of air extending from a cumulonimbus cloud.

B) change in wind direction and/or speed within a very short distance above the airport.

C) downward motion of the air associated with continuous winds blowing with an easterly component due to the rotation of the Earth.

228. I27 COM

Which are characteristics of a cold air mass moving over a warm surface?

A) Cumuliform clouds, turbulence, and poor visibility.

B) Cumuliform clouds, turbulence, and good visibility.

C) Stratiform clouds, smooth air, and poor visibility.

229. I23 COM

Why does the wind have a tendency to flow parallel to the isobars above the friction level?

A) Coriolis force tends to counterbalance the horizontal pressure gradient.

B) Coriolis force acts perpendicular to a line connecting the highs and lows.

C) Friction of the air with the Earth deflects the air perpendicular to the pressure gradient.

230. H953 COM

The wind system associated with a low-pressure area in the Northern Hemisphere is

A) an anticyclone and is caused by descending cold air.

B) a cyclone and is caused by Coriolis force.

C) an anticyclone and is caused by Coriolis force.

231. H953 COM

What prevents air from flowing directly from high-pressure areas to low-pressure areas?

A) Coriolis force.

B) Surface friction.

C) Pressure gradient force.

232. H953 COM

Which is true with respect to a high- or low-pressure system?

A) A high-pressure area or ridge is an area of rising air.

B) A low-pressure area or trough is an area of descending air.

C) A high-pressure area or ridge is an area of descending air.

233. I23 COM

While flying cross-country, in the Northern Hemisphere, you experience a continuous left crosswind which is associated with a major wind system. This indicates that you

A) are flying toward an area of generally unfavorable weather conditions.

B) have flown from an area of unfavorable weather conditions.

C) cannot determine weather conditions without knowing pressure changes.

234. I28 COM

Convective currents are most active on warm summer afternoons when winds are

A) light.

B) moderate.

C) strong.

235. I25 COM

What is the approximate base of the cumulus clouds if the temperature at 2,000 feet MSL is 10 °C. and the dewpoint is 1 °C?

A) 3,000 feet MSL.

B) 4,000 feet MSL.

C) 6,000 feet MSL.

236. I25 COM

If clouds form as a result of very stable, moist air being forced to ascend a mountain slope, the clouds will be

A) cirrus type with no vertical development or turbulence.

B) cumulus type with considerable vertical development and turbulence.

C) stratus type with little vertical development and little or no turbulence.

237. I25 COM

What determines the structure or type of clouds which will form as a result of air being forced to ascend?

A) The method by which the air is lifted.

B) The stability of the air before lifting occurs.

C) The relative humidity of the air after lifting occurs.

238. H951 COM

Refer to the excerpt from the following METAR report:

KTUS 08004KT 4SM HZ 26/04 A2995 RMK RAE36

At approximately what altitude AGL should bases of convective-type cumuliform clouds be expected?

A) 4,400 feet.

B) 8,800 feet.

C) 17,600 feet.

239. I26 COM

Which cloud types would indicate convective turbulence?

A) Cirrus clouds.

B) Nimbostratus clouds.

C) Towering cumulus clouds.

240. I26 COM

The presence of standing lenticular altocumulus clouds is a good indication of

A) lenticular ice formation in calm air.

B) very strong turbulence.

C) heavy icing conditions.

241. I25 COM

The formation of either predominantly stratiform or predominantly cumuliform clouds is dependent upon the

A) source of lift.

B) stability of the air being lifted.

C) temperature of the air being lifted.

242. I27 COM

Which combination of weather-producing variables would likely result in cumuliform-type clouds, good visibility, and showery rain?

A) Stable, moist air and orographic lifting.

B) Unstable, moist air and orographic lifting.

C) Unstable, moist air and no lifting mechanism.

243. I31 COM

Advection fog has drifted over a coastal airport during the day. What may tend to dissipate or lift this fog into low stratus clouds?

A) Nighttime cooling.

B) Surface radiation.

C) Wind 15 knots or stronger.

244. I31 COM

With respect to advection fog, which statement is true?

A) It is slow to develop, and dissipates quite rapidly.

B) It forms almost exclusively at night or near daybreak.

C) It can appear suddenly during day or night, and it is more persistent than radiation fog.

245. I31 COM

A situation most conducive to the formation of advection fog is

A) a light breeze moving colder air over a water surface.

B) an air mass moving inland from the coastline during the winter.

C) a warm, moist air mass settling over a cool surface under no-wind conditions.

246. I31 COM

In what ways do advection fog, radiation fog, and steam fog differ in their formation or location?

A) Radiation fog is restricted to land areas; advection fog is most common along coastal areas; steam fog forms over a water surface.

B) Advection fog deepens as windspeed increases up to 20 knots; steam fog requires calm or very light wind; radiation fog forms when the ground or water cools the air by radiation.

C) Steam fog forms from moist air moving over a colder surface; advection fog requires cold air over a warmer surface; radiation fog is produced by radiational cooling of the ground.

247. I31 COM

Fog produced by frontal activity is a result of saturation due to

A) nocturnal cooling.

B) adiabatic cooling.

C) evaporation of precipitation.

248. I31 COM

Which in-flight hazard is most commonly associated with warm fronts?

A) Advection fog.

B) Radiation fog.
C) Precipitation-induced fog.

249. I24 COM
Ice pellets encountered during flight normally are evidence that
A) a warm front has passed.
B) a warm front is about to pass.
C) there are thunderstorms in the area.

250. I27 COM
Which is true regarding a cold front occlusion? The air ahead of the warm front
A) is colder than the air behind the overtaking cold front.
B) is warmer than the air behind the overtaking cold front.
C) has the same temperature as the air behind the overtaking cold front.

251. I32 COM
During the winter months in the middle latitudes, the jet stream shifts toward the
A) north and speed decreases.
B) south and speed increases.
C) north and speed increases.

252. I32 COM
A common location of clear air turbulence is
A) in an upper trough on the polar side of a jet stream.
B) near a ridge aloft on the equatorial side of a high-pressure flow.
C) south of an east/west oriented high-pressure ridge in its dissipating stage.

253. I32 COM
Which feature is associated with the tropopause?
A) Constant height above the Earth.
B) Abrupt change in temperature lapse rate.
C) Absolute upper limit of cloud formation.

254. I32 COM
The jet stream and associated clear air turbulence can sometimes be visually identified in flight by
A) dust or haze at flight level.
B) long streaks of cirrus clouds.
C) a constant outside air temperature.

255. I32 COM

The strength and location of the jet stream is normally

A) weaker and farther north in the summer.

B) stronger and farther north in the winter.

C) stronger and farther north in the summer.

256. K02 COM

A strong wind shear can be expected

A) in the jetstream front above a core having a speed of 60 to 90 knots.

B) if the 5 °C isotherms are spaced between 7° to 10° of latitude.

C) on the low-pressure side of a jetstream core where the speed at the core is stronger than 110 knots.

257. K02 COM

Which type of jetstream can be expected to cause the greater turbulence?

A) A straight jetstream associated with a low-pressure trough.

B) A curving jetstream associated with a deep low-pressure trough.

C) A jetstream occurring during the summer at the lower latitudes.

258. I29 COM

Frost covering the upper surface of an airplane wing usually will cause

A) the airplane to stall at an angle of attack that is higher than normal.

B) the airplane to stall at an angle of attack that is lower than normal.

C) drag factors so large that sufficient speed cannot be obtained for takeoff.

259. I29 COM

Which situation would most likely result in freezing precipitation? Rain falling from air which has a temperature of

A) 32 °F or less into air having a temperature of more than 32 °F.

B) 0 °C or less into air having a temperature of 0 °C or more.

C) more than 32 °F into air having a temperature of 32 °F or less.

260. I24 COM

Virga is best described as

A) streamers of precipitation trailing beneath clouds which evaporates before reaching the ground.

B) wall cloud torrents trailing beneath cumulonimbus clouds which dissipate before reaching the ground.

C) turbulent areas beneath cumulonimbus clouds.

261. I24 COM

Moisture is added to a parcel of air by

A) sublimation and condensation.

B) evaporation and condensation.

C) evaporation and sublimation.

262. I24 COM

What is indicated if ice pellets are encountered at 8,000 feet?

A) Freezing rain at higher altitude.

B) You are approaching an area of thunderstorms.

C) You will encounter hail if you continue your flight.

263. H954 COM

When conditionally unstable air with high-moisture content and very warm surface temperature is forecast, one can expect what type of weather?

A) Strong updrafts and stratonimbus clouds.

B) Restricted visibility near the surface over a large area.

C) Strong updrafts and cumulonimbus clouds.

264. I25 COM

What type weather can one expect from moist, unstable air, and very warm surface temperatures?

A) Fog and low stratus clouds.

B) Continuous heavy precipitation.

C) Strong updrafts and cumulonimbus clouds.

265. I25 COM

What are the characteristics of stable air?

A) Good visibility; steady precipitation; stratus clouds.

B) Poor visibility; steady precipitation; stratus clouds.

C) Poor visibility; intermittent precipitation; cumulus clouds.

266. I25 COM

From which measurement of the atmosphere can stability be determined?

A) Atmospheric pressure.

B) The ambient lapse rate.

C) The dry adiabatic lapse rate.

267. I25 COM

Which would increase the stability of an air mass?

A) Warming from below.

B) Cooling from below.

C) Decrease in water vapor.

268. I25 COM

Which would decrease the stability of an air mass?

A) Warming from below.

B) Cooling from below.

C) Decrease in water vapor.

269. I24 COM

Which is true regarding actual air temperature and dewpoint temperature spread? The temperature spread

A) decreases as the relative humidity decreases.

B) decreases as the relative humidity increases.

C) increases as the relative humidity increases.

270. I21 COM

What is the standard temperature at 10,000 feet?

A) -5 °C.

B) -15 °C.

C) +5 °C.

271. I21 COM

Every physical process of weather is accompanied by or is the result of

A) a heat exchange.

B) the movement of air.

C) a pressure differential.

272. I21 COM

Which conditions are favorable for the formation of a surface based temperature inversion?

A) Clear, cool nights with calm or light wind.

B) Area of unstable air rapidly transferring heat from the surface.

C) Broad areas of cumulus clouds with smooth, level bases at the same altitude.

273. I22 COM

What are the standard temperature and pressure values for sea level?

A) 15 °C and 29.92 inches Hg.

B) 59 °F and 1013.2 inches Hg.

C) 15 °C and 29.92 Mb.

274. I22 COM

GIVEN:

| | |
|---|---|
| Pressure altitude | 12,000 ft |
| True air temperature | +50 °F |

From the conditions given, the approximate density altitude is

A) 11,900 feet.

B) 14,130 feet.

C) 18,150 feet.

275. I30 COM

The most severe weather conditions, such as destructive winds, heavy hail, and tornadoes, are generally associated with

A) slow-moving warm fronts which slope above the tropopause.

B) squall lines.

C) fast-moving occluded fronts.

276. I30 COM

Of the following, which is accurate regarding turbulence associated with thunderstorms?

A) Outside the cloud, shear turbulence can be encountered 50 miles laterally from a severe storm.

B) Shear turbulence is encountered only inside cumulonimbus clouds or within a 5-mile radius of them.

C) Outside the cloud, shear turbulence can be encountered 20 miles laterally from a severe storm.

277. I30 COM

If airborne radar is indicating an extremely intense thunderstorm echo, this thunderstorm should be avoided by a distance of at least

A) 20 miles.

B) 10 miles.

C) 5 miles.

278. I30 COM

Which statement is true regarding squall lines?

A) They are always associated with cold fronts.

B) They are slow in forming, but rapid in movement.

C) They are nonfrontal and often contain severe, steady-state thunderstorms.

279. I30 COM

Select the true statement pertaining to the life cycle of a thunderstorm.

A) Updrafts continue to develop throughout the dissipating stage of a thunderstorm.

B) The beginning of rain at the Earth's surface indicates the mature stage of the thunderstorm.

C) The beginning of rain at the Earth's surface indicates the dissipating stage of the thunderstorm.

280. I30 COM

What visible signs indicate extreme turbulence in thunderstorms?

A) Base of the clouds near the surface, heavy rain, and hail.

B) Low ceiling and visibility, hail, and precipitation static.

C) Cumulonimbus clouds, very frequent lightning, and roll clouds.

281. I30 COM

What feature is normally associated with the cumulus stage of a thunderstorm?

A) Roll cloud.

B) Continuous updraft.

C) Beginning of rain at the surface.

282. I30 COM

What minimum distance should exist between intense radar echoes before any attempt is made to fly between these thunderstorms?

A) 20 miles.

B) 30 miles.

C) 40 miles.

283. I30 COM

Which weather phenomenon signals the beginning of the mature stage of a thunderstorm?

A) The start of rain.

B) The appearance of an anvil top.

C) Growth rate of cloud is maximum.

284. I30 COM

Hail is most likely to be associated with

A) cumulus clouds.

B) cumulonimbus clouds.

C) stratocumulus clouds.

285. I30 COM

Which statement is true concerning the hazards of hail?

A) Hail damage in horizontal flight is minimal due to the vertical movement of hail in the clouds.

B) Rain at the surface is a reliable indication of no hail aloft.

C) Hailstones may be encountered in clear air several miles from a thunderstorm.

286. I23 COM

In the Northern Hemisphere, the wind is deflected to the

A) right by Coriolis force.

B) right by surface friction.

C) left by Coriolis force.

287. I23 COM

With regard to windflow patterns shown on surface analysis charts; when the isobars are

A) close together, the pressure gradient force is slight and wind velocities are weaker.

B) not close together, the pressure gradient force is greater and wind velocities are stronger.

C) close together, the pressure gradient force is greater and wind velocities are stronger.

288. I23 COM

When flying into a low-pressure area in the Northern Hemisphere, the wind direction and velocity will be from the

A) left and decreasing.

B) left and increasing.

C) right and decreasing.

289. I23 COM

What causes wind?

A) The Earth's rotation.

B) Air mass modification.

C) Pressure differences.

290. H940 COM

In small airplanes, normal recovery from spins may become difficult if the

A) CG is too far rearward, and rotation is around the longitudinal axis.

B) CG is too far rearward, and rotation is around the CG.

C) spin is entered before the stall is fully developed.

291. H105 COM

An aircraft is loaded with a ramp weight of 3,650 pounds and having a CG of 94.0, approximately how much baggage would have to be moved from the rear baggage area at station 180 to the forward baggage area at station 40 in order to move the CG to 92.0?

A) 52.14 pounds.

B) 62.24 pounds.

C) 78.14 pounds.

292. H110 COM

The CG of an aircraft may be determined by

A) dividing total arms by total moments.

B) dividing total moments by total weight.

C) multiplying total weight by total moments.

293. H110 COM

GIVEN:

Weight A. 155 pounds at 45 inches aft of datum

Weight B. 165 pounds at 145 inches aft of datum

Weight C. 95 pounds at 185 inches aft of datum

Based on this information, where would the CG be located aft of datum?

A) 86.0 inches.

B) 116.8 inches.

C) 125.0 inches.

294. H941 COM

(Refer to figure 38.)

GIVEN:

| | |
|---|---|
| Empty weight (oil is included) | 1,271 lb |
| Empty weight moment (in-lb/1,000) | 102.04 |
| Pilot and copilot | 400 lb |
| Rear seat passenger | 140 lb |
| Cargo | 100 lb |
| Fuel | 37 gal |

Is the airplane loaded within limits?

A) Yes, the weight and CG is within limits.

B) No, the weight exceeds the maximum allowable.

C) No, the weight is acceptable, but the CG is aft of the aft limit.

295. H110 COM

The CG of an aircraft can be determined by which of the following methods?

A) Dividing total arms by total moments.

B) Multiplying total arms by total weight.

C) Dividing total moments by total weight.

296. H105 COM

When computing weight and balance, the basic empty weight includes the weight of the airframe, engine(s), and all installed optional equipment. Basic empty weight also includes

A) the unusable fuel, full operating fluids, and full oil.

B) all usable fuel, full oil, hydraulic fluid, but does not include the weight of pilot, passengers, or baggage.

C) all usable fuel and oil, but does not include any radio equipment or instruments that were installed by someone other than the manufacturer.

297. H105 COM

If all index units are positive when computing weight and balance, the location of the datum would be at the

A) centerline of the main wheels.

B) nose, or out in front of the airplane.

C) centerline of the nose or tailwheel, depending on the type of airplane.

298. H105 COM

GIVEN:

| | |
|---|---|
| Total weight | 3,037 lb |
| CG locationstation | 68.8 |
| Fuel consumption | 12.7 GPH |
| Fuel CGstation | 68.0 |

After 1 hour 45 minutes of flight time, the CG would be located at station

A) 68.77.

B) 68.83.

C) 69.77.

299. H105 COM

GIVEN:

| | |
|---|---|
| Total weight | 4,137 lb |
| CG location station | 67.8 |
| Fuel consumption | 13.7 GPH |

Fuel CG station 68.0

After 1 hour 30 minutes of flight time, the CG would be located at station

A) 67.79.

B) 68.79.

C) 70.78.

300. H940 COM

If an airplane is loaded to the rear of its CG range, it will tend to be unstable about its

A) vertical axis.

B) lateral axis.

C) longitudinal axis.

301. O220 COM

If a balloon inadvertently descends into stratus clouds and is shielded from the Sun, and if no corrections are made, one can expect to descend

A) more slowly.

B) more rapidly.

C) at an unchanged rate.

302. H404 COM

One advantage nylon rope has over manila rope is that it

A) will not stretch.

B) is nearly three times as strong.

C) does not tend to snap back if it breaks.

303. H404 COM

A pilot should be aware that drag ropes constructed of hemp or nylon

A) should be a maximum of 100 feet long and used only in gas balloons.

B) can be considered safe because they will not conduct electricity.

C) can conduct electricity when contacting powerlines carrying 600 volts or more current if they are not clean and dry.

304. O257 COM

While in flight, ice begins forming on the outside of the fuel tank in use. This would most likely be caused by

A) water in the fuel.

B) a leak in the fuel line.

C) vaporized fuel instead of liquid fuel being drawn from the tank into the main burner.

305. J08 COM

(Refer to figure 52, point 2)

GIVEN:

Sacramento Executive (SAC) tower reports wind 290 at 10 kts

Highest balloon flight altitude 1,200 MSL

If you depart for a 2-hour balloon flight from SAC airport (point 2), which response best describes what ATC requires of you?

A) Your flightpath will require communications with Sacramento Executive (SAC) control tower and not with Sacramento Approach Control.

B) You must communicate with Sacramento Approach Control because you will enter the Alert Area.

C) You will have to contact Sacramento Approach Control.

306. O150 COM

To perform a normal descent in a gas balloon, it is necessary to release

A) air.

B) gas.

C) ballast.

307. H439 COM

The term `to weigh off` as used in ballooning means to determine the

A) standard weight and balance of the balloon.

B) neutral buoyancy by taking weight off at launch.

C) amount of gas required for an ascent to a preselected altitude.

308. O261 COM

One means of vertical control on a gas balloon is

A) by using the rip panel rope.

B) valving gas or releasing ballast.

C) opening and closing the appendix.

309. O30 COM

The weigh-off procedure is useful because the

A) pilot can adjust the altimeter to the correct setting.

B) ground crew can assure that downwind obstacles are cleared.

C) pilot will learn what the equilibrium conditions are prior to being committed to fly.

310. H227 COM

A written test has validity when it

A) yields consistent results.

B) samples liberally whatever is being measured.

C) actually measures what it is supposed to measure and nothing else.

311. H227 COM

A written test which has reliability is one which

A) yields consistent results.

B) measures small differences in the achievement of students.

C) actually measures what it is supposed to measure and nothing else.

312. H214 COM

Probably the greatest single barrier to effective communication is the

A) use of inaccurate statements.

B) use of abstractions by the communicator.

C) lack of a common core of experience between communicator and receiver.

313. H213 COM

The effectiveness of communication between the instructor and the student is measured by the degree of

A) motivation manifested by the student.

B) similarity between the idea transmitted and the idea received.

C) attention the student gives to the instructor during a lesson.

314. H212 COM

When under stress, normal individuals usually react

A) with marked changes in mood on different lessons.

B) with extreme overcooperation, painstaking self-control, and laughing or singing.

C) by responding rapidly and exactly, often automatically, within the limits of their experience and training.

315. H211 COM

When a student uses excuses to justify inadequate performance, it is an indication of the defense mechanism known as

A) aggression.

B) resignation.

C) rationalization.

316. H211 COM

Although defense mechanisms can serve a useful purpose, they can also be a hindrance because they

A) alleviate the cause of problems.

B) can result in delusional behavior.

C) involve self-deception and distortion of reality.

317. H233 COM

Faulty performance due to student overconfidence should be corrected by

A) high praise when no errors are made.

B) increasing the standard of performance for each lesson.

C) providing strong, negative evaluation at the end of each lesson.

318. H233 COM

What should an instructor do if a student's slow progress is due to discouragement and lack of confidence?

A) Assign subgoals which can be attained more easily than the normal learning goals.

B) Emphasize the negative aspects of poor performance by pointing out the serious consequences.

C) Raise the performance standards so the student will gain satisfaction in meeting higher standards.

319. H233 COM

What should an instructor do if a student is suspected of not fully understanding the principles involved in a task, even though the student can correctly perform the task?

A) Require the student to apply the same elements to the performance of other tasks.

B) Require the student to repeat the task, as necessary, until the principles are understood.

C) Repeat demonstrating the task as necessary until the student understands the principles.

320. H202 COM

While material is being taught, students may be learning other things as well. What is the additional learning called?

A) Residual learning.

B) Conceptual learning.

C) Incidental learning.

321. H201 COM

A change in behavior as a result of experience can be defined as

A) learning.

B) knowledge.

C) understanding.

322. H204 COM

In levels of learning, what are the steps of progression?

A) Application, understanding, rote, and correlation.

B) Rote, understanding, application, and correlation.

C) Correlation, rote, understanding, and application.

323. H204 COM

The level of learning at which the student becomes able to associate an element which has been learned with other blocks of learning is called the level of

A) application.

B) association.

C) correlation.

324. H203 COM

In the learning process, fear or the element of threat will

A) inspire the student to improve.

B) narrow the student's perceptual field.

C) decrease the rate of associative reactions.

325. H203 COM

Which is true? Motivations

A) should be obvious to be useful.

B) must be tangible to be effective.

C) may be very subtle and difficult to identify.

326. H203 COM

Motivations in the form of reproof and threats should be avoided with all but the student who is

A) bored.

B) discouraged.

C) overconfident.

327. H203 COM

What is the basis of all learning?

A) Insight.

B) Perception.

C) Motivation.

328. H207 COM

To ensure proper habits and correct techniques during training, an instructor should

A) never repeat subject matter already taught.

B) use the 'building-block' technique of instruction.

C) introduce tasks which are difficult and challenging to the student.

329. H233 COM

In planning any instructional activity, the instructor's first consideration should be to

A) determine the overall objectives and standards.

B) identify the blocks of learning which make up the overall objective.

C) establish common ground between the instructor and students.

330. H223 COM

In a 'guided discussion,' lead-off questions should usually begin with

A) 'why ...'

B) 'when ...'

C) 'where ...'

331. H220 COM

The method of arranging lesson material from the simple to complex, past to present, and known to unknown, is one that

A) the instructor should avoid.

B) creates student thought pattern departures.

C) indicates the relationship of the main points of the lesson.

332. H220 COM

When teaching from the KNOWN to the UNKNOWN, an instructor is using the student's

A) anxieties and insecurities.

B) previous experiences and knowledge.

C) previously held opinions, both valid and invalid.

333. H238 COM

Students quickly become apathetic when they

A) understand the objective toward which they are working.

B) are assigned goals that are difficult, but possible to attain.

C) recognize that their instructor is poorly prepared to conduct the lesson.

334. H985 COM

(Refer to figure 52, point 1)

GIVEN:

| | |
|---|---|
| Departure point | Georgetown Airport (Q61) |
| Departure time | 0637 |
| Winds aloft forecast (FD) at your altitude | 1008 |

At 0755, the balloon should be

A) over Auburn Airport (AUN).

B) over the town of Auburn.

C) slightly west of the town of Garden Valley.

335. H979 COM

(Refer to figure 52, point 4) If Lincoln Regional Airport (LHM) is departed at 0630, and at 0730 the town of Newcastle is reached, the wind direction and speed would be approximately

A) 082° at 6 knots.

B) 082° at 17 knots.

C) 262° at 11 knots.

336. J37 COM

(Refer to figure 54, point 1) A balloon flight over Livermore Airport (LVK) at 3,000 feet MSL

A) requires a transponder, but ATC communication is not necessary.

B) does not require a transponder or ATC communication.

C) cannot be accomplished without meeting all Class B airspace requirements.

337. J37 COM

(Refer to figure 54, point 1) What minimum altitude is required to avoid the Livermore Airport (LVK) Class D airspace?

A) 2,503 feet MSL.

B) 2,901 feet MSL.

C) 3,297 feet MSL.

338. J37 COM

(Refer to figure 52, point 4) The highest obstruction with high intensity lighting within 10 NM of Lincoln Regional Airport (LHM) is how high above the ground?

A) 1,254 feet.

B) 662 feet.

C) 299 feet.

339. A26 COM

A commercial pilot who gives flight instruction in lighter-than-air category aircraft must keep a record of such instruction for a period of

A) 1 year.

B) 2 years.

C) 3 years.

340. A26 COM

What is the maximum amount of flight instruction an authorized instructor may give in any 24 consecutive hours?

A) 8 hours.

B) 6 hours.

C) 4 hours.

341. A20 COM

To exercise the privileges of a commercial pilot certificate with a lighter-than-air category, balloon class rating, what medical certification is required?

A) At least a current second-class medical certificate when carrying passengers for hire.

B) No medical certification is required.

C) Statement by pilot certifying that he/she has no known physical defects that makes him/her unable to act as pilot of a balloon.

342. A22 COM

To operate a balloon in solo flight, a student pilot must have received a logbook endorsement by an authorized instructor who gave the flight training within the preceding

A) 30 days.

B) 60 days.

C) 90 days.

343. B08 COM

During a night operation, the pilot of aircraft #1 sees only the green light of aircraft #2. If the aircraft are converging, which pilot has the right-of-way? The pilot of aircraft

A) #2; aircraft #2 is to the right of aircraft #1

B) #1; aircraft #1 is to the right of aircraft #2.

C) #2; aircraft #2 is to the left of aircraft #1.

344. B11 COM

If a balloon is not equipped for night flight and official sunset is 1730 EST, the latest a pilot may operate that balloon and not violate regulations is

A) 1629 EST.

B) 1729 EST.

C) 1829 EST.

345. B11 COM

Operation of a balloon, during the period of sunset to sunrise, requires that it be equipped and lighted with

A) red and green position lights.

B) a steady aviation white position light and a red or white anticollision light.

C) approved aviation red and white lights.

346. B13 COM

Which is true relating to Airworthiness Directives (AD's) ?

A) AD's are advisory in nature and are, generally, not addressed immediately.

B) Noncompliance with AD's renders an aircraft unairworthy.

C) Compliance with AD's is the responsibility of maintenance personnel.

347. O220 COM

On a balloon equipped with a blast valve, the blast valve is used for

A) climbs only.

B) emergencies only.

C) control of altitude.

348. O277 COM

What should a pilot do if a small hole is seen in the fabric during inflation?

A) Continue the inflation and make a mental note of the location of the hole for later repair.

B) Instruct a ground crewmember to inspect the hole, and if under 5 inches in length, continue the inflation.

C) Consult the flight manual to determine if the hole is within acceptable damage limits established for the balloon being flown.

349. O220 COM

Why should propane lines be bled after use?

A) Fire may result from spontaneous combustion.

B) The propane may expand and rupture the lines.

C) If the temperature is below freezing, the propane may freeze.

350. O170 COM

The best way to determine burner BTU availability is the

A) burner sound.

B) tank quantity.

C) fuel pressure gauge.

351. O171 COM

Propane is preferred over butane for fuel in hot air balloons because

A) it has a higher boiling point.

B) it has a lower boiling point.

C) butane is very explosive under pressure.

352. O220 COM

For what reason is methanol added to the propane fuel of hot air balloons?

A) As a fire retardant.

B) As an anti-icing additive.

C) To reduce the temperature.

353. O170 COM

The purpose of the preheating coil as used in hot air balloons is to

A) prevent ice from forming in the fuel lines.

B) warm the fuel tanks for more efficient fuel flow.

C) vaporize the fuel for more efficient burner operation.

354. O220 COM

Why is it considered a good practice to blast the burner after changing fuel tanks?

A) To check for fuel line leaks.

B) It creates an immediate source of lift.

C) To ensure the new tank is functioning properly.

355. O270 COM

If ample fuel is available, within which temperature range will propane fuel vaporize sufficiently to provide enough fuel pressure for burner operation during flight?

A) 0 °F to 30 °F.

B) 10 °F to 30 °F.

C) 30 °F to 90 °F.

356. A66 COM

Excluding Hawaii, the vertical limits of the Federal Low Altitude airways extend from

A) 700 feet AGL up to, but not including, 14,500 feet MSL.

B) 1,200 feet AGL up to, but not including, 18,000 feet MSL.

C) 1,200 feet AGL up to, but not including, 14,500 feet MSL.

357. J37 COM

(Refer to figure 54, point 4) The thinner outer magenta circle depicted around San Francisco International Airport is

A) the outer segment of Class B airspace.

B) an area within which an appropriate transponder must be used from outside of the Class B airspace from the surface to 10,000 feet MSL.

C) a Mode C veil boundary where a balloon may penetrate without a transponder provided it remains below 8,000 feet MSL.

358. J37 COM

(Refer to figure 54, point 2) After departing from Byron Airport (C83) with a northeast wind, you discover you are approaching Livermore Class D airspace and flight visibility is approximately 2 1/2 miles. You must

A) contact Livermore ATCT on 119.65 and advise of your intentions.

B) stay below 1,200 feet to remain in Class G.

C) stay below 700 feet to remain in Class G and land.

359. O220 COM

What action is most appropriate when an envelope overtemperature condition occurs?

A) Turn the main burner OFF.

B) Land as soon as practical.

C) Throw all unnecessary equipment overboard.

360. O220 COM

Which is the proper way to detect a fuel leak?

A) Sight.

B) Use of smell and sound.

C) Check fuel pressure gauge.

361. O170 COM

Which action would be appropriate if a small leak develops around the stem of the tank valve, and no other tanks have sufficient fuel to reach a suitable landing field?

A) Warm the tank valve leak with your bare hand.

B) Turn the leaking tank handle to the full-open position.

C) Turn off the tank, then slowly reopen to reseat the seal.

362. O170 COM

To respond to a small leak around the stem of a Rego blast valve in a single-burner system balloon, one should

A) turn off the fuel system and make an immediate landing.

B) continue operating the blast valve making very small quick blasts until a good landing field appears.

C) continue operating the blast valve, making long infrequent blasts and opening the handle slightly to reduce leakage until a good landing field appears.

363. H414 COM

The windspeed is such that it is necessary to deflate the envelope as rapidly as possible during a landing. When should the deflation port (rip panel) be opened?

A) Prior to ground contact.

B) The instant the gondola contacts the surface.

C) As the balloon skips off the surface the first time and the last of the ballast has been discharged.

364. H414 COM

Which precaution should be exercised if confronted with the necessity of having to land when the air is turbulent?

A) Land in the center of the largest available field.

B) Throw propane equipment overboard immediately prior to touchdown.

C) Land in the trees to absorb shock forces, thus cushioning the landing.

365. O30 COM

If you are over a heavily-wooded area with no open fields in the vicinity and have only about 10 minutes of fuel remaining, you should

A) stay low and keep flying in hope that you will find an open field.

B) climb as high as possible to see where the nearest landing field is.

C) land in the trees while you have sufficient fuel for a controlled landing.

366. O30 COM

The practice of allowing the ground crew to lift the balloon into the air is

A) a safe way to reduce stress on the envelope.

B) unsafe because it can lead to a sudden landing at an inopportune site just after lift-off.

C) considered to be a good operating practice when obstacles must be cleared shortly after lift-off.

367. O263 COM

It may be possible to make changes in the direction of flight in a hot air balloon by

A) using the maneuvering vent.

B) operating at different flight altitudes.

C) flying a constant atmospheric pressure gradient.

368. O265 COM

When landing a balloon, what should the occupant(s) do to minimize landing shock?

A) Be seated on the floor of the basket.

B) Stand back-to-back and hold onto the load ring.

C) Stand with knees slightly bent facing the direction of movement.

369. H226 COM

Which is true about an instructor's critique of a student's performance?

A) It must be given in written form.

B) It should be subjective rather than objective.

C) It is a step in the learning process, not in the grading process.

370. H226 COM

When an instructor critiques a student, it should always be

A) done in private.

B) subjective rather than objective.

C) conducted immediately after the student's performance.

371. H219 COM

To enhance a student's acceptance of further instruction, the instructor should

A) keep the student informed of his/her progress.

B) continually prod the student to maintain motivational levels.

C) establish performance standards a little above the student's actual ability.

372. H226 COM

The purpose of a critique is to

A) identify only the student's faults and weaknesses.

B) give a delayed evaluation of the student's performance.

C) provide direction and guidance to raise the level of the student's performance.

373. H227 COM

To be effective in oral quizzing during the conduct of a lesson, a question should

A) center on only one idea.

B) include a combination of where, how, and why.

C) be easy for the student at that particular stage of training.

374. H227 COM

A written test is said to be comprehensive when it

A) yields consistent results.

B) includes all levels of difficulty.

C) samples liberally whatever is being measured.

375. H213 COM

To communicate effectively, instructors must

A) utilize highly organized notes.

B) display an authoritarian attitude.

C) display a positive, confident attitude.

376. H227 COM

Proper quizzing by the instructor during a lesson can have which of these results?

A) It identifies points which need emphasis.

B) It encourages rote response from students.

C) It permits the introduction of new material which was not covered previously.

377. H212 COM

Which would most likely indicate that a student is reacting abnormally to stress?

A) Thinks and acts rapidly.

B) Extreme overcooperation.

C) Extreme sensitivity to surroundings.

378. H211 COM

Taking physical or mental flight is a defense mechanism that students use when they

A) want to escape from frustrating situations.

B) become bewildered and lost in the advanced phase of training.

C) attempt to justify actions that otherwise would be unacceptable.

379. H211 COM

When a student asks irrelevant questions or refuses to participate in class activities, it usually is an indication of the defense mechanism known as

A) aggression.

B) resignation.

C) substitution.

380. H211 COM

When students become so frustrated they no longer believe it possible to work further, they usually display which defense mechanism?

A) Aggression.

B) Resignation.

C) Rationalization.

381. H211 COM

A student who is daydreaming is engaging in the defense mechanism known as

A) flight.

B) substitution.

C) rationalization.

382. H212 COM

The instructor can counteract anxiety in a student by

A) treating student fear as a normal reaction.

B) allowing the student to select tasks to be performed.

C) continually citing the unhappy consequences of faulty performance.

383. H210 COM

Before a student can concentrate on learning, which of these human needs must be satisfied first?

A) Social needs.

B) Safety needs.

C) Physical needs.

384. H228 COM

Which is true concerning the use of visual aids? They

A) should be used to emphasize key points in a lesson.

B) ensure getting and holding the student's attention.

C) should not be used to cover a subject in less time.

385. H228 COM

Instructional aids used in the teaching/learning process should be

A) self-supporting and should require no explanation.

B) compatible with the learning outcomes to be achieved.

C) selected prior to developing and organizing the lesson plan.

386. H235 COM

Which of these instructor actions would more likely result in students becoming frustrated?

A) Presenting a topic or maneuver in great detail.

B) Covering up instructor mistakes or bluffing when the instructor is in doubt.

C) Telling the students that their work is unsatisfactory without explanation.

387. H233 COM

What should an instructor do with a student who assumes that correction of errors is unimportant?

A) Invent student deficiencies.

B) Try to reduce the student's overconfidence.

C) Raise the standards of performance, demanding greater effort.

388. H233 COM

Should an instructor be concerned about an apt student who makes very few mistakes?

A) No. Some students have an innate, natural aptitude for flight.

B) Yes. Faulty performance may soon appear due to student overconfidence.

C) Yes. The student will lose confidence in the instructor if the instructor does not invent deficiencies in the student's performance.

389. H233 COM

When a student correctly understands the situation and knows the correct procedure for the task, but fails to act at the proper time, the student most probably

A) lacks self-confidence.

B) will be unable to cope with the demands of flying.

C) is handicapped by indifference or lack of interest.

390. H235 COM

An instructor can most effectively maintain a high level of student motivation by

A) making each lesson a pleasurable experience.

B) easing the standards for an apprehensive student.

C) continually challenging the student to meet the highest objectives of training.

391. H204 COM

The level of learning at which a person can repeat something without understanding is called

A) rote learning.

B) basic learning.

C) random learning.

392. H203 COM

To effectively motivate students, an instructor should

A) promise rewards.

B) appeal to their pride and self-esteem.

C) maintain pleasant personal relationships, even if necessary to lower standards.

393. H203 COM

Perceptions result when a person

A) gives meaning to sensations.

B) groups together bits of information.

C) responds to visual cues first, then aural cues, and relates these cues to ones previously learned.

394. H219 COM

Evaluation of student performance and accomplishment during a lesson should be based on the

A) student's background and past experiences.

B) objectives and goals that were established in the lesson plan.

C) student's actual performance as compared to an arbitrary standard.

395. H235 COM

The professional relationship between the instructor and the student should be based upon

A) the need to disregard the student's personal faults, interests, or problems.

B) setting the learning objectives very high so that the student is continually challenged.

C) the mutual acknowledgement that they are important to each other and both are working toward the same objective.

396. H235 COM

Which is true regarding professionalism as an instructor?

A) Anything less than sincere performance destroys the effectiveness of the professional instructor.

B) To achieve professionalism, actions and decisions must be limited to standard patterns and practices.

C) A single definition of professionalism would encompass all of the qualifications and considerations which must be present before true professionalism can exist.

397. H221 COM

Which should be the first step in preparing a lecture?

A) Organizing the material.

B) Researching the subject.

C) Establishing the objective and desired outcome.

398. H221 COM

What is one advantage of a lecture?

A) It provides for student participation.

B) Many ideas can be presented in a short time.

C) Maximum attainment in all types of learning outcomes is possible.

399. H220 COM

In developing a lesson, the instructor must logically organize explanations and demonstrations to help the student

A) understand the separate items of knowledge.

B) understand the relationships of the main points of the lesson.

C) learn by rote so that performance of the procedure will become automatic.

400. H216 COM

What is the proper sequence in which the instructor should employ the four basic steps in the teaching process?

A) Explanation, demonstration, practice, and evaluation.

B) Explanation, trial and practice, evaluation, and review.

C) Preparation, presentation, application, and review and evaluation.

401. H238 COM

What is the primary consideration in determining the length and frequency of flight instruction periods?

A) Fatigue.

B) Mental acuity.

C) Physical conditioning.

402. L05 COM

Hazardous attitudes which contribute to poor pilot judgment can be effectively counteracted by

A) taking meaningful steps to be more assertive with attitudes.

B) early recognition of hazardous thoughts.

C) redirecting that hazardous attitude so that appropriate action can be taken.

403. H979 COM

(Refer to figure 53, point 3) If at 1,000 feet MSL and drifting at 10 knots toward Firebaugh Airport (Q49), at what approximate distance from the airport should you begin a 100 ft/min ascent to arrive at the center of the airport at 3,000 feet?

A) 3.5 NM.

B) 5 NM.

C) 8 NM.

404. J37 COM

(Refer to figure 54, point 5) A balloon drifts over the town of Brentwood on a magnetic course of 185° at 10 knots. If wind conditions remain the same, after 1 hour 30 minutes the pilot

A) with no radio aboard, must be above 2,900 feet MSL and must have an operating transponder aboard.

B) must remain above 600 feet MSL for national security reasons.

C) with no radio aboard, must be above 2,900 feet MSL.

405. H979 COM

(Refer to figure 54, point 3)

GIVEN:

| | | |
|---|---|---|
| Departure point | Meadowlark Airport | |
| Departure time | 0710 | |
| Wind | 180° | 8 kts |

At 0917 the balloon should be

A) east of VINCO intersection.

B) over the town of Brentwood.

C) 3 miles south of the town of Brentwood.

406. H983 COM

(Refer to figure 52, point 4) If you depart Lincoln Regional Airport (LHM) and track a true course of 075° with a groundspeed of 12 knots, your position after 1 hour 20 minutes of flight would be over the town of

A) Foresthill.

B) Clipper Gap.

C) Weimar.

407. J37 COM

(Refer to figure 53, point 4) A balloon departs Mendota Airport (Q84) and drifts for a period of 1 hour and 30 minutes in a wind of 230° at 10 knots. What maximum elevation figure would assure obstruction clearance during the next 1 1/2 hours of flight?

A) 1,600 feet MSL.

B) 3,200 feet MSL.

C) 9,400 feet MSL.

408. J37 COM

(Refer to figure 52, point 5) A balloon is launched at University Airport (0O5) and drifts south-southwesterly toward the depicted obstruction. If the altimeter was set to the current altimeter setting upon launch, what should it indicate if the balloon is to clear the obstruction by 500 feet above its top?

A) 510 feet MSL.

B) 813 feet MSL.

C) 881 feet MSL.

409. J37 COM

(Refer to figure 53, point 4) While drifting above the Mendota Airport (Q84) with a northwesterly wind of 8 knots, you

A) are required to contact ATC on frequency 122.9 Mhz.

B) should remain higher than 2,000 feet AGL until you are at least 8 NM southeast of that airport.

C) will be over Firebaugh Airport (Q49) in approximately 1 hour.

410. A24 COM

A person who makes application for a commercial pilot certificate with a balloon rating, using a balloon with an airborne heater, will be

A) authorized both airborne heater or gas balloon.

B) limited to balloon, with an airborne heater.

C) authorized to conduct ground and flight training in a balloon with an airborne heater or gas balloon.

411. A22 COM

A student pilot may not operate a balloon in solo flight unless that pilot has

A) received a minimum of 5 hours of flight training in a balloon from an authorized instructor.

B) received and logged flight training from an authorized instructor and demonstrated satisfactory proficiency and safety on the required maneuvers and procedures.

C) made and logged at least 10 balloon flights under the supervision of an authorized instructor.

412. J37 COM

A balloon flight through a restricted area is

A) never permitted.

B) permitted anytime, but caution should be exercised because of high-speed military aircraft.

C) permitted at certain times, but only with prior permission by the appropriate authority.

413. B13 COM

Which is correct concerning preventive maintenance, when accomplished by a pilot?

A) A record of preventive maintenance is not required.

B) A record of preventive maintenance must be entered in the maintenance records.

C) Records of preventive maintenance must be entered in the FAA-approved flight

414. B08 COM

Which person is directly responsible for the prelaunch briefing of passengers for a balloon flight?

A) Crew chief.

B) Safety officer.

C) Pilot in command.

415. J25 COM

What single reference contains information regarding a volcanic eruption, that is occurring or expected to occur?

A) In-Flight Weather Advisories.

B) Terminal Area Forecasts (TAF).

C) Weather Depiction Chart.

416. I26 COM

The conditions necessary for the formation of stratiform clouds are a lifting action and

A) unstable, dry air.

B) stable, moist air.

C) unstable, moist air.

417. I30 COM

During the life cycle of a thunderstorm, which stage is characterized predominately by downdrafts?

A) Mature.

B) Developing.

C) Dissipating.

418. H427 COM

What is the weight of propane?

A) 4.2 pounds per gallon.

B) 6.0 pounds per gallon.

C) 7.5 pounds per gallon.

419. H1022 COM

If the glider`s radius of turn is 175 feet at 40 MPH, what would the radius of turn be if the TAS is increased to 80 MPH while maintaining a constant angle of bank?

A) 350 feet.

B) 525 feet.

C) 700 feet.

420. H1067 COM

In which situation is a hazardous stall more likely to occur if inadequate airspeed allowance is made for wind velocity gradient?

A) During the approach to a landing.

B) While thermalling at high altitudes.

C) During takeoff and climb while on aerotow.

421. H1030 COM

A glide ratio of 22:1 with respect to the air mass will be

A) 11:1 in a tailwind and 44:1 in a headwind.

B) 22:1 regardless of wind direction and speed.

C) 11:1 in a headwind and 44:1 in a tailwind.

422. H1035 COM

The reason for retaining water ballast while thermals are strong, is to

A) decrease forward speed.

B) decrease cruise performance.

C) increase cruise performance.

423. H1030 COM

Minimum sink speed is the airspeed which results in the

A) least loss of altitude in a given time.

B) least loss of altitude in a given distance.

C) shallowest glide angle in any convective situation.

424. H1024 COM

The maximum airspeed at which abrupt and full deflection of the controls would not cause structural damage to a glider is called the

A) speed-to-fly.

B) maneuvering speed.

C) never-exceed speed.

425. H1066 COM

Which is true regarding minimum control airspeed while thermalling? Minimum control airspeed

A) may coincide with minimum sink airspeed.

B) is greater than minimum sink airspeed.

C) never coincides with minimum sink airspeed.

426. H1033 COM

In regard to the location of the glider's CG and its effect on glider spin characteristics, which is true? If the CG is too far

A) aft, a flat spin may develop.

B) forward, spin entry will be impossible.

C) aft, spins will degenerate into CG high-speed spirals.

427. H1086 COM

Select the true statement concerning oxygen systems that are often installed in sailplanes.

A) Most civilian aircraft oxygen systems use low-pressure cylinders for oxygen storage.

B) When aviation breathing oxygen is not available, hospital or welder's oxygen serves as a good substitute.

C) In case of a malfunction of the main oxygen system, a bailout bottle may serve as an emergency oxygen supply.

428. H1013 COM

The purpose of wing spoilers is to decrease

A) the drag.

B) landing speed.

C) the lift of the wing.

429. H1026 COM

When flying on a heading of east from one thermal to the next, the airspeed is increased to the speed-to-fly with wings level. What will the conventional magnetic compass indicate while the airspeed is increasing?

A) A turn toward the south.

B) A turn toward the north.

C) Straight flight on a heading of 090°.

430. H933 COM

When flying on a heading of west from one thermal to the next, the airspeed is increased to the 'speed-to-fly' with the wings level. What will the conventional magnetic compass indicate while the airspeed is increasing?

A) A turn toward the south.

B) A turn toward the north.

C) Straight flight on a heading of 270°.

431. H1025 COM

Which is true concerning total energy compensators? The instrument

A) responds to up and down air currents only.

B) will register climbs that result from stick thermals.

C) reacts to climbs and descents like a conventional rate-of-climb indicator.

432. H1025 COM

The advantage of a total energy compensator is that this system

A) includes a speed ring around the rim of the variometer.

B) adds the effect of stick thermals to the total energy produced by thermals.

C) reduces climb and dive errors on variometer indications caused by airspeed changes.

433. H1024 COM

Which is true regarding electric variometers?

A) They do not utilize outside air static pressure lines.

B) Are generally considered to be less sensitive and has a slower response time than a vertical-speed indicator.

C) The sensitivity can be adjusted in flight to suit existing air conditions.

434. H1038 COM

Which is true regarding the assembly of a glider for flight?

A) It may be accomplished by the pilot.

B) It is not required by regulations for a glider pilot to know this.

C) It must be accomplished under the supervision of an FAA maintenance inspector.

435. J37 COM

(Refer to figure 52, point 7) The floor of Class E airspace over the town of Woodland is

A) 700 feet AGL over part of the town and no floor over the remainder.

B) 1,200 feet AGL over part of the town and no floor over the remainder.

C) both 700 feet and 1,200 feet AGL.

436. J37 COM

(Refer to figure 52, point 8) The floor of the Class E airspace over the town of Auburn is

A) 1,200 feet MSL.

B) 700 feet AGL.

C) 1,200 feet AGL.

437. H1111 COM

With regard to two or more gliders flying in the same thermal, which is true?

A) All turns should be to the right.

B) Turns should be in the same direction as the highest glider.

C) Turns should be made in the same direction as the first glider to enter the thermal.

438. H1072 COM

What corrective action should be taken during a landing if the glider pilot makes the roundout too soon while using spoilers?

A) Leave the spoilers extended and lower the nose slightly.

B) Retract the spoilers and leave them retracted until after touchdown.

C) Retract the spoilers until the glider begins to settle again, then extend the spoilers.

439. H1083 COM

What would be a proper action or procedure to use if you are getting too low on a cross-country flight in a glider?

A) Fly directly into the wind and make a straight-in approach at the end of the glide.

B) Have a suitable landing area selected upon reaching 2,000 feet AGL, and a specific field chosen upon reaching 1,500 feet AGL.

C) Continue on course until descending to 500 feet, then select a field and confine the search for lift to an area within gliding range of a downwind leg for the field you have chosen.

440. H1044 COM

The primary cause of towline slack during aerotows is

A) poor coordination.

B) acceleration.

C) positioning the glider too high.

441. H1043 COM

During an aerotow, is it good operating practice to release from a low-tow position?

A) No. The tow ring may strike and damage the glider after release.

B) No. The towline may snap forward and strike the towplane after release.

C) Yes. Low-tow position is the correct position for releasing from the towplane.

442. H1041 COM

During aerotow takeoffs in crosswind conditions, the glider starts drifting downwind after becoming airborne and before the towplane lifts off. The glider pilot should

A) not correct for a crosswind during this part of the takeoff.

B) crab into the wind to remain in the flightpath of the towplane.

C) hold upwind rudder in order to crab into the wind and remain in the flightpath of the towplane.

443. H1053 COM

The towrope breaks when at the steepest segment of the climb during a winch launch. To recover to a normal gliding attitude, the pilot should

A) relax the back stick pressure to avoid excessive loss of altitude.

B) apply forward pressure until the buffeting sound and vibration disappear.

C) move the stick fully forward immediately and hold it there until the nose crosses the horizon.

444. B12 COM

GIVEN:

| | |
|---|---|
| Glider's maximum certificated operating weight | 1,140 lb |
| Towline breaking strength | 3,050 lb |

Which meets the requirement for one of the safety links? A breaking strength of

A) 812 pounds installed where the towline is attached to the towplane.

B) 912 pounds installed where the towline is attached to the glider.

C) 2,300 pounds installed where the towline is attached to the glider.

445. H1049 COM

At what point during an autotow should the glider pilot establish the maximum pitch attitude for the climb?

A) Immediately after takeoff.

B) 100 feet above the ground.

C) 200 feet above the ground.

446. H1050 COM

When preparing for an autotow with a strong crosswind, where should the glider and towrope be placed?

A) Straight behind the tow car.

B) Obliquely to the line of takeoff on the upwind side of the tow car.

C) Obliquely to the line of takeoff on the downwind side of the tow car.

447. H1051 COM

Which would cause pitch oscillations or porpoising during a winch launch?

A) Excessive winch speed.

B) Insufficient winch speed.

C) Excessive slack in the towline.

448. B12 COM

During aerotow of a glider that weighs 940 pounds, which towrope tensile strength would require the use of safety links at each end of the rope?

A) 752 pounds.

B) 1,500 pounds.

C) 2,000 pounds.

449. H1036 COM

Which procedure can be used to increase forward speed on a cross-country flight?

A) Maintain minimum sink speed plus or minus one-half the estimated wind velocity.

B) Use water ballast while thermals are strong and dump the water when thermals are weak.

C) Use water ballast while thermals are weak and dump the water when thermals are strong.

450. H1030 COM

When flying into a headwind, penetrating speed is the glider's

A) speed-to-fly.

B) minimum sink speed.

C) speed-to-fly plus half the estimated wind velocity.

451. H1030 COM

When flying into a strong headwind on a long final glide or a long glide back to the airport, the recommended speed to use is the

A) best glide speed.

B) minimum sink speed.

C) speed-to-fly plus half the estimated windspeed at the glider's flight altitude.

452. H1030 COM

What is the proper airspeed to use when flying between thermals on a cross-country flight against a headwind?

A) The best L/D speed increased by one-half the estimated wind velocity.

B) The best L/D speed decreased by one-half the estimated wind velocity.

C) The minimum sink speed increased by one-half the estimated wind velocity.

453. H1030 COM

If the glider has drifted a considerable distance from the airport while soaring, the best speed to use to reach the airport when flying into a headwind is the

A) best glide speed.

B) minimum sink speed.

C) speed-to-fly plus half the estimated windspeed at the glider's altitude.

454. H1112 COM

Which is true regarding ridge soaring with the wind direction perpendicular to the ridge?

A) When flying between peaks along a ridge, the pilot can expect a significant decrease in wind and lift.

B) When very close to the surface of the ridge, the glider's speed should be reduced to the minimum sink speed.

C) If the glider drifts downwind from the ridge and sinks slightly lower than the crest of the ridge, the glider should be turned away from the ridge and a high speed attained.

455. H1112 COM

Which is true regarding ridge soaring with the wind direction perpendicular to the ridge?

A) When very close to the surface of the ridge, the glider's speed should be reduced to the minimum sink speed.

B) When the wind and lift are very strong on the windward side of the ridge, a weak sink condition will exist on the leeward side.

C) If the glider drifts downwind from the ridge and sinks slightly lower than the crest of the ridge, the glider should be turned away from the ridge and a high speed attained.

456. A21 COM

To act as pilot in command of a glider, using self-launch procedures, that person must hold a pilot certificate with a glider rating and have accomplished

A) ground and flight training in self-launch procedures and operations, and possess a logbook endorsement from a flight instructor certifying such proficiency.

B) appropriate flight training and meet recent experience in self-launch operations.

C) a competency flight check given by an authorized flight instructor.

457. A21 COM

To act as pilot in command of an airplane towing a glider, the tow pilot is required to have

A) a logbook record of having made at least three flights as sole manipulator of the controls of a glider being towed by an airplane.

B) a logbook endorsement from an authorized glider instructor certifying receipt of ground and flight training in gliders, and be proficient with techniques and procedures for safe towing of gliders.

C) at least a private pilot certificate with a category rating for powered aircraft, and made and logged at least three flights as pilot or observer in a glider being towed by an airplane.

458. A20 COM

To exercise the privileges of a commercial pilot certificate with a glider category rating, what medical certification is required?

A) A statement by the pilot certifying he/she has no known physical defects that makes him/her unable to pilot a glider.

B) At least a second-class medical certificate when carrying passengers for hire.

C) No medical certification is required.

459. B08 COM

When flying a glider above 10,000 feet MSL and more than 1,200 feet AGL, what minimum flight visibility is required?

A) 3 NM.

B) 5 SM.

C) 5 NM.

460. H1096 COM

Which thermal index would predict the best probability of good soaring conditions?

A) -10.

B) -5.

C) +20.

461. I35 COM

(Refer to figure 6.) With regard to the soundings taken at 1400 hours, between what altitudes could optimum thermalling be expected at the time of the sounding?

A) From 2,500 to 6,000 feet.

B) From 6,000 to 10,000 feet.

C) From 13,000 to 15,000 feet.

462. I35 COM

(Refer to figure 6.) At the 0900 hours sounding and the line plotted from the surface to 10,000 feet, what temperature must exist at the surface for instability to take place between these altitudes? Any temperature

A) less than 68 °F.

B) more than 68 °F.

C) less than 43 °F.

463. I35 COM

When soaring in the vicinity of mountain ranges, the greatest potential danger from vertical and rotor-type currents will usually be encountered on the

A) leeward side when flying with a tailwind.

B) leeward side when flying into the wind.

C) windward side when flying into the wind.

464. I35 COM

Which is true regarding the development of convective circulation?

A) Cool air must sink to force the warm air upward.

B) Warm air is less dense and rises on its own accord.

C) Warmer air covers a larger surface area than the cool air; therefore, the warmer air is less dense and rises.

465. I35 COM

Convective circulation patterns associated with sea breezes are caused by

A) water absorbing and radiating heat faster than the land.

B) land absorbing and radiating heat faster than the water.

C) cool and less dense air moving inland from over the water, causing it to rise.

466. I35 COM

Which is true regarding the effect of fronts on soaring conditions?

A) A slow moving front provides the strongest lift.

B) Good soaring conditions usually exist after passage of a warm front.

C) Frequently, the air behind a cold front provides excellent soaring for several days.

467. H1097 COM

Which is true regarding the effect of fronts on soaring conditions?

A) Good soaring conditions usually exist after passage of a warm front.

B) Excellent soaring conditions usually exist in the cold air ahead of a warm front.

C) Frequently the air behind a cold front provides excellent soaring for several days.

468. H1096 COM

Which thermal index would predict the best probability of good soaring conditions?

A) +5.

B) -5.

C) -10.

469. I35 COM

A thermal column is rising from an asphalt parking lot and the wind is from the south at 12 knots. Which statement would be true?

A) As altitude is gained, the best lift will be found directly above the parking lot.

B) As altitude is gained, the center of the thermal will be found farther north of the parking lot.

C) The slowest rate of sink would be close to the thermal and the fastest rate of sink farther from it.

470. I35 COM

Which is generally true when comparing the rate of vertical motion of updrafts with that of downdrafts associated with thermals?

A) Updrafts and downdrafts move vertically at the same rate.

B) Downdrafts have a slower rate of vertical motion than do updrafts.

C) Updrafts have a slower rate of vertical motion than do downdrafts.

471. I35 COM

Select the true statement concerning thermals.

A) Thermals are unaffected by winds aloft.

B) Strong thermals have proportionately increased sink in the air between them.

C) A thermal invariably remains directly above the surface area from which it developed.

472. H1103 COM

The conditions most favorable to wave formation over mountainous areas are a layer of

A) stable air at mountaintop altitude and a wind of at least 20 knots blowing across the ridge.

B) unstable air at mountaintop altitude and a wind of at least 20 knots blowing across the ridge.

C) moist, unstable air at mountaintop altitude and a wind of less than 5 knots blowing across the ridge.

473. H110 COM

(Refer to figure 36.)

| GIVEN: | WEIGHT | ARM | MOMENT |
|---|---|---|---|
| Empty weight | 610 | 96.47 | ? |
| Pilot (fwd seat) | 150 | ? | ? |
| Passenger (aft seat) | 180 | ? | ? |
| Radio and batteries | 10 | 23.20 | ? |
| TOTALS | ? | ? | ? |

The CG is located at station

A) 33.20.

B) 59.55.

C) 83.26.

474. P12 COM

Critical factors affecting the flight characteristics and controllability of an airship are

A) airspeed and power.

B) static and dynamic trim.

C) temperature and atmospheric density.

475. P01 COM

How does the pilot know when pressure height has been reached? Liquid in the gas

A) and air manometers will fall below the normal level.

B) manometer will fall and the liquid in the air manometer will rise above normal levels.

C) manometer will rise and the liquid in the air manometer will fall below normal levels.

476. P05 COM

Damper valves should normally be kept closed during a maximum rate climb to altitude because any air forced into the system would

A) decrease the volume of gas within the envelope.

B) decrease the purity of the gas within the envelope.

C) increase the amount of air to be exhausted, resulting in a lower rate of ascent.

477. P05 COM

The ballonet volume of an airship envelope with respect to the total gas volume is approximately

A) 15 percent.

B) 25 percent.

C) 30 percent.

478. P05 COM

When checking gas pressure (pressure height) of an airship during a climb, the air damper valves should be

A) opened.

B) closed.

C) opened aft and closed forward.

479. P11 COM

When operating an airship with the ballonet air valve in the automatic forward position, the aft valve locks should not be engaged with either after-damper open because

A) ballonet overinflation and rupture may occur.

B) the aircraft will enter an excessive bow-high attitude.

C) the aircraft will enter an excessive stern-high attitude.

480. P04 COM

Maximum headway in an airship is possible only under which condition?

A) Slightly nosedown.

B) Slightly tail down.

C) Flying in equilibrium.

481. P11 COM

Which action is necessary to perform a normal descent in an airship?

A) Valve gas.

B) Valve air.

C) Take air into the aft ballonets.

482. P03 COM

If both engines fail while en route, an airship should be

A) brought to a condition of equilibrium as soon as possible and free-ballooned.

B) trimmed nose-heavy to use the airship's negative dynamic lift to fly the airship down to the landing site.

C) trimmed nose-light to use the airship's positive dynamic lift to control the angle and rate of descent to the landing site.

483. P11 COM

To land an airship that is 250 pounds heavy when the wind is calm, the best landing can usually be made if the airship is

A) in trim.

B) nose-heavy approximately 20°.

C) tail-heavy approximately 20°.

484. P11 COM

A heavy airship flying dynamically with air ballasted forward to overcome a climbing tendency and slowed down for a weigh-off in the air prior to landing, will be very bow heavy. This condition must be corrected prior to landing by

A) ballasting air aft.

B) discharging forward ballast.

C) dumping fuel from the forward tanks.

485. P11 COM

Which take-off procedure is considered to be most hazardous?

A) Failing to apply full engine power properly on all takeoffs, regardless of wind.

B) Maintaining only 50 percent of the maximum permissible positive angle of inclination.

C) Maintaining a negative angle of inclination during takeoff after elevator response is adequate for controllability.

486. J42 COM

(Refer to figure 28) If the glide slope becomes inoperative during the ILS RWY 31R procedure at DSM, what MDA applies?

A) 1,157 feet.

B) 1,320 feet.

C) 1,360 feet.

487. J18 COM

While being radar vectored, an approach clearance is received. The last assigned altitude should be maintained until

A) reaching the FAF.

B) advised to begin descent.

C) established on a segment of a published route or instrument approach procedure.

488. J42 COM

(Refer to figures 26) The final approach fix for the ILS precision approach is located at

A) DENAY intersection.

B) glide slope intercept.

C) ROMEN intersection/locator outer marker.

489. J42 COM

(Refer to figure 27.) In the DEN ILS RWY 35R procedure, the glide slope intercept altitude is

A) 11,000 feet MSL.

B) 7,000 feet MSL.

C) 9,000 feet MSL.

490. J42 COM

(Refer to figure 29) When approaching the ATL ILS RWY 8L, how far from the FAF is the missed approach point?

A) 4.8 NM.

B) 5.2 NM.

C) 12.0 NM.

491. J42 COM

(Refer to figure 28.) During the ILS RWY 31R procedure at DSM, the minimum altitude for glide slope interception is

A) 2,365 feet MSL.

B) 2,400 feet MSL.

C) 3,000 feet MSL.

492. J18 COM

Which is true regarding STAR's? STAR's are

A) used to separate IFR and known VFR traffic.

B) to facilitate transition between en route and instrument approach procedures.

C) used at certain airports to relieve traffic congestion.

493. B08 COM

You are flying an airship under an IFR flight plan and experience two-way communications radio failure while in VFR conditions. In this situation, you should continue your flight under

A) VFR and land as soon as practicable.

B) VFR and proceed to your flight-plan destination.

C) IFR and maintain the last assigned route and altitude to your flight-plan destination.

494. J33 COM

Does the ATC term, 'cruise 3000', apply to airship IFR operations?

A) No, this term applies to airplane IFR operations only.

B) Yes, it means that any assigned altitude can be vacated without notifying ATC.

C) Yes, in part, it authorizes the pilot to commence the approach at the destination airport at the pilot's discretion.

495. J35 COM

(Refer to figure 55) En route on V112 from BTG VORTAC to LTJ VORTAC, the minimum altitude crossing GYMME intersection is

A) 6,400 feet.

B) 6,500 feet.

C) 7,000 feet.

496. J14 COM

When operating an airship under IFR with a VFR-on-top clearance, what altitude should be maintained?

A) The last IFR altitude assigned by ATC.

B) An IFR cruising altitude appropriate to the magnetic course being flown.

C) A VFR cruising altitude appropriate to the magnetic course being flown and as restricted by ATC.

497. B10 COM

When must an operational check on the aircraft VOR equipment be accomplished to operate under IFR? Within the preceding

A) 10 days or 10 hours of flight time.

B) 30 days.

C) 30 days or 30 hours of flight time.

498. B13 COM

If an ATC transponder installed in an aircraft has not been tested, inspected, and found to comply with regulations within a specified period, what is the limitation on its use?

A) Its use is not permitted.

B) It may be used when in Class G airspace.

C) It may be used for VFR flight only.

499. B13 COM

An aircraft carrying passengers for hire has been on a schedule of inspection every 100 hours of time in service. Under which condition, if any, may that aircraft be operated beyond 100 hours without a new inspection?

A) The aircraft may be flown for any flight as long as the time in service has not exceeded 110 hours.

B) The aircraft may be dispatched for a flight of any duration as long as 100 hours has not been exceeded at the time it departs.

C) The 100-hour limitation may be exceeded by not more than 10 hours if necessary to reach a place at which the inspection can be done.

500. B10 COM

If weather conditions are such that it is required to designate an alternate airport on your IFR flight plan, you should plan to carry enough fuel to arrive at the first airport of intended landing, fly from that airport to the alternate airport, and fly thereafter for

A) 30 minutes at slow cruising speed.

B) 45 minutes at normal cruising speed.

C) 1 hour at normal cruising speed.

501. B08 COM

When weather information indicates that abnormally high barometric pressure exists, or will be above _____ inches of mercury, flight operations will not be authorized contrary to the requirements published in NOTAMs.

A) 30.50

B) 31.00

C) 32.00

502. H703 COM

Coning is caused by the combined forces of

A) drag, weight, and translational lift.

B) lift and centrifugal force.

C) flapping and centrifugal force.

503. H765 COM

Why should gyroplane operations within the cross-hatched portion of a Height vs. Velocity chart be avoided?

A) The rotor RPM may build excessively high if it is necessary to flare at such low altitudes.

B) Sufficient airspeed may not be available to ensure a safe landing in case of an engine failure.

C) Turbulence near the surface can dephase the blade dampers causing geometric unbalanced conditions on the rotor system.

504. H720 COM

(Refer to figures 45 and 46.)

GIVEN:

Pressure altitude 4,000 ft

Ambient temperature 80 °F

To clear a 50-foot obstacle, a jump takeoff would require

A) more distance than a running takeoff.

B) less distance than a running takeoff.

C) the same distance as a running takeoff.

505. H720 COM

(Refer to figures 45 and 46.)

GIVEN:

Pressure altitude 4,000 ft

Ambient temperature 80 °F

The takeoff distance to clear a 50-foot obstacle is

A) 1,225 feet for a jump takeoff.

B) 1,440 feet for a running takeoff.

C) less for a running takeoff than for a jump takeoff.

506. H762 COM

The principal factor limiting the never-exceed speed (VNE) of a gyroplane is

A) turbulence and altitude.

B) blade-tip speed, which must remain below the speed of sound.

C) lack of sufficient cyclic stick control to compensate for dissymmetry of lift or retreating blade stall, depending on which occurs first.

507. B08 COM

Which is true regarding flight operations to or from a satellite airport, without an operating control tower, within the Class C airspace area?

A) Prior to takeoff, a pilot must establish communication with the ATC controlling facility.

B) Aircraft must be equipped with an ATC transponder.

C) Prior to entering that airspace, a pilot must establish and maintain communication with the ATC serving facility.

508. J37 COM

(Refer to figure 52, point 5) The floor of the Class E airspace over University Airport (0O5) is

A) the surface.

B) 700 feet AGL.

C) 1,200 feet AGL.

509. H767 COM

If ground resonance is experienced during rotor spin-up, what action should you take?

A) Taxi to a smooth area.

B) Make a normal takeoff immediately.

C) Close the throttle and slowly raise the spin-up lever.

510. H766 COM

Select the true statement concerning gyroplane taxi procedures.

A) Avoid abrupt control movements when blades are turning.

B) The cyclic stick should be held in the neutral position at all times.

C) The cyclic stick should be held slightly aft of neutral at all times.

511. H766 COM

During the transition from pre-rotation to flight, all rotor blades change pitch

A) simultaneously to the same angle of incidence.

B) simultaneously but to different angles of incidence.

C) to the same degree at the same point in the cycle of rotation.

512. B10 COM

For an airport without an approved instrument approach procedure to be listed as an alternate airport on an IFR flight plan, the forecasted weather conditions at the time of arrival must have at least a

A) ceiling of 2,000 feet and visibility 3 SM.

B) ceiling and visibility that allows for a descent, approach, and landing under basic VFR.

C) ceiling of 1,000 feet and visibility 3 NM.

513. B10 COM

For an airport with an approved instrument approach procedure to be listed as an alternate airport on an IFR flight plan, the forecasted weather conditions at the time of arrival must be at or above the following weather minimums.

A) Ceiling 800 feet and visibility 2 SM for nonprecision.

B) Ceiling 800 feet and visibility 2 NM for nonprecision.

C) Ceiling 600 feet and visibility 2 NM for precision.

514. A21 COM

To act as pilot in command of a gyroplane carrying passengers, what must the pilot accomplish in that gyroplane to meet recent daytime flight experience requirements?

A) Make nine takeoffs and landings within the preceding 30 days.

B) Make three takeoffs and landings to a full stop within the preceding 90 days.

C) Make three takeoffs and landings within the preceding 90 days.

515. B11 COM

If an aircraft is not equipped with an electrical or anticollision light system, no person may operate that aircraft

A) after dark.

B) 1 hour after sunset.

C) after sunset to sunrise.

516. B09 COM

To begin a flight in a rotorcraft under VFR, there must be enough fuel to fly to the first point of intended landing and, assuming normal cruise speed, to fly thereafter for at least

A) 20 minutes.

B) 30 minutes.

C) 45 minutes.

517. G11 COM

Which incident would require that the nearest NTSB field office be notified immediately?

A) In-flight fire.

B) Ground fire resulting in fire equipment dispatch.

C) Fire of the primary aircraft while in a hangar which results in damage to other property of more than $25,000.

518. H116 COM

With respect to using the weight information given in a typical aircraft owner's manual for computing gross weight, it is important to know that if items have been installed in the aircraft in addition to the original equipment, the

A) allowable useful load is decreased.

B) allowable useful load remains unchanged.

C) maximum allowable gross weight is increased.

519. H777 COM

(Refer to figure 37.)

| GIVEN: | WEIGHT | MOMENT |
|---|---|---|
| Gyroplane basic weight | 1,315 | 150.1 (oil included) |
| Pilot weight | 140 | ? |
| Passenger weight | 150 | ? |
| 27 gal fuel | 162 | ? |

The CG is located

A) outside the CG envelope; the maximum gross weight is exceeded.

B) outside the CG envelope; the maximum gross weight and the gross-weight moment are exceeded.

C) within the CG envelope; neither maximum gross weight nor gross-weight moment is exceeded.

520. H777 COM

(Refer to figure 37.)

| GIVEN: | WEIGHT | MOMENT |
|---|---|---|
| Gyroplane basic weight | 1,315 | 154.0 (oil included) |
| Pilot weight | 145 | ? |
| Passenger weight | 153 | ? |
| 27 gal fuel | 162 | ? |

The CG is located

A) outside the CG envelope; the maximum gross weight is exceeded.

B) outside the CG envelope; but the maximum gross weight is not exceeded.

C) within the CG envelope; neither maximum gross weight nor gross-weight moment is exceeded.

521. H705 COM

Cyclic control pressure is applied during flight that results in a maximum increase in main rotor blade pitch angle at the 'three o'clock' position. Which way will the rotor disc tilt?

A) Aft.

B) Left.

C) Right.

522. H703 COM

What happens to the helicopter as it experiences translating tendency?

A) It tends to dip slightly to the right as the helicopter approaches approximately 15 knots in takeoff.
B) It gains increased rotor efficiency as air over the rotor system reaches approximately 15 knots.
C) It moves in the direction of tail rotor thrust.

523. H720 COM
Rotorcraft climb performance is most adversely affected by
A) higher than standard temperature and low relative humidity.
B) lower than standard temperature and high relative humidity.
C) higher than standard temperature and high relative humidity.

524. H720 COM
How does high density altitude affect rotorcraft performance?
A) Engine and rotor efficiency is reduced.
B) Engine and rotor efficiency is increased.
C) It increases rotor drag, which requires more power for normal flight.

525. H717 COM
As altitude increases, the VNE of a helicopter will
A) increase.
B) decrease.
C) remain the same.

526. H710 COM
When operating a helicopter in conditions favorable for carburetor icing, the carburetor heat should be
A) adjusted to keep the carburetor air temperature gauge indicating in the green arc at all times.
B) OFF for takeoffs, adjusted to keep the carburetor air temperature gauge indicating in the green arc at all other times.
C) OFF during takeoffs, approaches, and landings; adjusted to keep the carburetor air temperature gauge indicating in the green arc at all other times.

527. H706 COM
The primary purpose of the tail rotor system is to
A) assist in making coordinated turns.
B) maintain heading during forward flight.
C) counteract the torque effect of the main rotor.

528. H705 COM
Can the tail rotor produce thrust to the left?

A) No; the right thrust can only be reduced, causing tail movement to the left.

B) Yes; primarily so that hovering turns can be accomplished to the right.

C) Yes; primarily to counteract the drag of the transmission during autorotation.

529. H705 COM

If the RPM is low and the manifold pressure is high, what initial corrective action should be taken?

A) Increase the throttle.

B) Lower the collective pitch.

C) Raise the collective pitch.

530. H705 COM

During level flight, if the manifold pressure is high and the RPM is low, what initial corrective action should be made?

A) Decrease the throttle.

B) Increase the throttle.

C) Lower the collective pitch.

531. H745 COM

A medium-frequency vibration that suddenly occurs during flight could be indicative of a defective

A) main rotor system.

B) tail rotor system.

C) transmission system.

532. H745 COM

In most helicopters, medium-frequency vibrations indicate a defective

A) engine.

B) main rotor system.

C) tail rotor system.

533. H707 COM

A reciprocating engine in a helicopter is more likely to stop due to in-flight carburetor icing than will the same type engine in an airplane. This statement

A) has no basis in fact. The same type engine will run equally well in either aircraft.

B) is true. The freewheeling unit will not allow windmilling (flywheel) effect to be exerted on a helicopter engine.

C) is false. The clutch will immediately release the load from the helicopter engine under engine malfunctioning conditions.

534. H701 COM

The main rotor blades of a fully-articulated rotor system can

A) flap and feather collectively.

B) flap, drag, and feather independently.

C) feather independently, but cannot flap or drag.

535. H709 COM

The main rotor blades of a semirigid rotor system can

A) flap together as a unit.

B) flap, drag, and feather independently.

C) feather independently, but cannot flap or drag.

536. H745 COM

Abnormal helicopter vibrations in the low-frequency range are associated with which system or component?

A) Tail rotor.

B) Main rotor.

C) Transmission.

537. H708 COM

What is the primary purpose of the clutch?

A) It allows the engine to be started without driving the main rotor system.

B) It provides disengagement of the engine from the rotor system for autorotation.

C) It transmits engine power to the main rotor, tail rotor, generator/alternator, and other accessories.

538. H708 COM

What is the primary purpose of the freewheeling unit?

A) It allows the engine to be started without driving the main rotor system.

B) It provides speed reduction between the engine, main rotor system, and tail rotor system.

C) It provides disengagement of the engine from the rotor system for autorotation purposes.

539. B08 COM

When approaching to land at an airport, without an operating control tower, in Class G airspace, a helicopter pilot should

A) enter and fly a traffic pattern at 800 feet AGL.

B) make all turns to the left, unless otherwise indicated.

C) avoid the flow of fixed-wing aircraft.

540. B08 COM

When approaching to land at an airport with an ATC facility, in Class D airspace, the pilot must establish communications prior to

A) 4 NM, up to and including 2,500 feet AGL.

B) 10 NM, up to and including 3,000 feet AGL.

C) 30 SM, and be transponder equipped.

541. J37 COM

(Refer to figure 52, point 1) The floor of the Class E airspace above Georgetown Airport (Q61) is at

A) the surface.

B) 3,823 feet MSL.

C) 700 feet AGL.

542. H732 COM

During a normal approach to a hover, the cyclic pitch is used primarily to

A) maintain heading.

B) control rate of closure.

C) control angle of descent.

543. H732 COM

During a normal approach to a hover, the collective pitch control is used primarily to

A) maintain RPM.

B) control the rate of closure.

C) control the angle of descent.

544. H744 COM

What type approach should be made to a pinnacle under conditions of relatively high wind and turbulence?

A) A normal approach.

B) A steeper-than-normal approach.

C) A shallower-than-normal approach.

545. H744 COM

If turbulence and downdrafts are expected during a pinnacle approach, plan to make a

A) steeper-than-normal approach.

B) normal approach, maintaining a lower-than-normal airspeed.

C) shallow approach, maintaining a higher-than-normal airspeed.

546. H745 COM

During a near-vertical power approach into a confined area with the airspeed near zero, what hazardous condition may develop?

A) Ground resonance.

B) Settling with power.

C) Blade stall vibration.

547. H745 COM

An excessively steep approach angle and abnormally slow closure rate should be avoided during an approach to a hover, primarily because

A) the airspeed indicator would be unreliable.

B) a go-around would be very difficult to accomplish.

C) settling with power could develop, particularly during the termination.

548. H705 COM

During climbing flight, the manifold pressure is low and the RPM is high. What initial corrective action should be taken?

A) Increase the throttle.

B) Decrease the throttle.

C) Raise the collective pitch.

549. H745 COM

When making an autorotation to touchdown, what action is most appropriate?

A) A slightly nose-high attitude at touchdown is the proper procedure.

B) The skids should be in a longitudinally level attitude at touchdown.

C) Aft cyclic application after touchdown is desirable to help decrease ground run.

550. H746 COM

Using right pedal to assist a right turn during an autorotative descent will probably result in what actions?

A) A decrease in rotor RPM, pitch up of the nose, decrease in sink rate, and increase in indicated airspeed.

B) An increase in rotor RPM, pitch up of the nose, decrease in sink rate, and increase in indicated airspeed.

C) An increase in rotor RPM, pitch down of the nose, increase in sink rate, and decrease in indicated airspeed.

551. H746 COM

Using left pedal to assist a left turn during an autorotative descent will probably cause the rotor RPM to

A) increase and the airspeed to decrease.

B) decrease and the aircraft nose to pitch down.

C) increase and the aircraft nose to pitch down.

552. H749 COM

Ground resonance is more likely to occur with helicopters that are equipped with

A) rigid rotor systems.

B) semi-rigid rotor systems.

C) fully articulated rotor systems.

553. H745 COM

Which procedure will result in recovery from settling with power?

A) Increase collective pitch and power.

B) Maintain constant collective pitch and increase throttle.

C) Increase forward speed and reduce collective pitch.

554. H745 COM

If complete power failure should occur while cruising at altitude, the pilot should

A) partially lower the collective pitch, close the throttle, then completely lower the collective pitch.

B) lower the collective pitch as necessary to maintain proper rotor RPM, and apply right pedal to correct for yaw.

C) close the throttle, lower the collective pitch to the full-down position, apply left pedal to correct for yaw, and establish a normal power-off glide.

555. H745 COM

The antitorque system fails during cruising flight and a powered approach landing is commenced. If the helicopter yaws to the right just prior to touchdown, what could the pilot do to help swing the nose to the left?

A) Increase the throttle.

B) Decrease the throttle.

C) Increase collective pitch.

556. H745 COM

If antitorque failure occurred during cruising flight, what could be done to help straighten out a left yaw prior to touchdown?

A) A normal running landing should be made.

B) Make a running landing using partial power and left cyclic.

C) Apply available throttle to help swing the nose to the right just prior to touchdown.

557. H745 COM

What are the major indications of an incipient retreating blade stall situation, in order of occurrence?

A) Low-frequency vibration, pitchup of the nose, and a roll in the direction of the retreating blade.

B) Slow pitchup of the nose, high-frequency vibration, and a tendency for the helicopter to roll.

C) Slow pitchup of the nose, tendency for the helicopter to roll, followed by a medium-frequency vibration.

558. H745 COM

How should a pilot react at the onset of retreating blade stall?

A) Reduce collective pitch, rotor RPM, and forward airspeed.

B) Reduce collective pitch, increase rotor RPM, and reduce forward airspeed.

C) Increase collective pitch, reduce rotor RPM, and reduce forward airspeed.

559. H745 COM

To recover from a settling with power condition, the pilot should

A) not apply antitorque pedal during the recovery.

B) increase rotor RPM, reduce forward airspeed, and minimize maneuvering.

C) apply forward cyclic and simultaneously reduce collective, if altitude permits.

560. H745 COM

When operating at high forward airspeed, retreating blade stall is more likely to occur under conditions of

A) low gross weight, high density altitude, and smooth air.

B) high gross weight, low density altitude, and smooth air.

C) high gross weight, high density altitude, and turbulent air.

561. H739 COM

During the entry into a quick stop, how should the collective pitch control be used? It should be

A) lowered as necessary to prevent ballooning.

B) raised as necessary to prevent a rotor overspeed.

C) raised as necessary to prevent a loss of altitude.

562. H743 COM

When conducting a confined area-type operation, the primary purpose of the high reconnaissance is to determine the

A) power requirements for the approach.

B) suitability of the area for landing.

C) amount of slope in the landing area.

563. H741 COM

Normal RPM should be maintained during a running landing primarily to ensure

A) adequate directional control until the helicopter stops.

B) that sufficient lift is available should an emergency develop.

C) longitudinal and lateral control, especially if the helicopter is heavily loaded or high density altitude conditions exist.

564. H744 COM

During a pinnacle approach under conditions of high wind and turbulence, the pilot should make a

A) shallow approach, maintaining a constant line of descent with cyclic applications.

B) normal approach, maintaining a slower-than-normal rate of descent with cyclic applications.

C) steeper-than-normal approach, maintaining the desired angle of descent with collective applications.

565. H745 COM

During the flare portion of a power-off landing, the rotor RPM tends to

A) remain constant.

B) increase initially.

C) decrease initially.

566. H742 COM

When planning slope operations, only slopes of 5° gradient or less should be considered, primarily because

A) ground effect is lost on slopes of steeper gradient.

B) downwash turbulence is more severe on slopes of steeper gradient.

C) most helicopters are not designed for operations on slopes of steeper gradient.

567. H742 COM

When making a slope landing, the cyclic pitch control should be used to

A) lower the downslope skid to the ground.

B) hold the upslope skid against the slope.

C) place the rotor disc parallel to the slope.

568. H742 COM

What is the procedure for a slope landing?

A) Use maximum RPM and maximum manifold pressure.

B) If the slope is 10° or less, the landing should be made perpendicular to the slope.

C) When parallel to the slope, slowly lower the upslope skid to the ground prior to lowering the downslope skid.

569. H726 COM

During calm wind conditions, in most helicopters, which of these flight operations would require the most power?

A) A left-pedal turn.

B) A right-pedal turn.

C) Hovering in ground effect.

570. H726 COM

You are hovering during calm wind conditions and decide to make a right-pedal turn. In most helicopters equipped with reciprocating engines, the engine RPM will tend to

A) increase.

B) decrease.

C) remain unaffected.

571. H739 COM

The proper action to initiate a quick stop is to apply

A) forward cyclic, while raising the collective and applying right antitorque pedal.

B) aft cyclic, while raising the collective and applying left antitorque pedal.

C) aft cyclic, while lowering the collective and applying right antitorque pedal.

572. H727 COM

To taxi on the surface in a safe and efficient manner, helicopter pilots should use the

A) cyclic pitch to control starting, taxi speed, and stopping.

B) collective pitch to control starting, taxi speed, and stopping.

C) antitorque pedals to correct for drift during crosswind conditions.

573. H727 COM

During surface taxiing, the cyclic pitch stick is used to control

A) heading.

B) ground track.

C) forward movement.

574. H727 COM

To taxi on the surface in a safe and efficient manner, one should use the cyclic pitch to

A) start and stop aircraft movement.

B) maintain heading during crosswind conditions.

C) correct for drift during crosswind conditions.

575. H742 COM

Takeoff from a slope is normally accomplished by

A) making a downslope running takeoff if the surface is smooth.

B) simultaneously applying collective pitch and downslope cyclic control.

C) bringing the helicopter to a level attitude before completely leaving the ground.

576. B10 COM

A pilot performing a published instrument approach is not authorized to perform a procedure turn when

A) maneuvering at radar vectoring altitudes.

B) receiving a radar vector to a final approach course or fix.

C) maneuvering at minimum safe altitudes.

577. B10 COM

Pilots are not authorized to land an aircraft from an instrument approach unless the

A) flight visibility is at, or exceeds the visibility prescribed in the approach procedure being used.

B) flight visibility and ceiling are at, or exceeds the minimums prescribed in the approach being used.

C) visual approach slope indicator and runway references are distincly visible to the pilot.

578. B10 COM

The pilot in command of an aircraft operated under IFR, in controlled airspace, shall report as soon as practical to ATC when

A) experiencing any malfunctions of navigational, approach, or communications equipment, occurring in flight.

B) requested to contact a new controlling facility.

C) climbing or descending to assigned altitudes.

579. J37 COM

(Refer to figure 54, point 1) A helicopter flight over Livermore Airport (LVK) at 3,000 feet MSL

A) requires a transponder, but ATC communication is not necessary.

B) does not require a transponder or ATC communication.

C) cannot be accomplished without meeting all Class B airspace requirements.

580. B08 COM

While in flight a helicopter and an airplane are converging at a 90° angle, and the helicopter is located to the right of the airplane. Which aircraft has the right-of-way, and why?

A) The helicopter, because it is to the right of the airplane.

B) The helicopter, because helicopters have the right-of-way over airplanes.

C) The airplane, because airplanes have the right-of-way over helicopters.

581. B12 COM

Which is true with respect to operating limitations of a 'restricted' category helicopter?

A) A 'restricted' category helicopter is limited to an operating radius of 25 miles from its home base.

B) A pilot of a 'restricted' category helicopter is required to hold a commercial pilot certificate.

C) No person may operate a 'restricted' category helicopter carrying passengers or property for compensation or hire.

582. B08 COM

Which is true with respect to formation flights? Formation flights are

A) authorized when carrying passengers for hire, with prior arrangement with the pilot in command of each aircraft in the formation.

B) not authorized when visibilities are less than 3 SM.

C) not authorized when carrying passengers for hire.

583. B08 COM

Operating regulations for U.S.-registered civil helicopters require that during movement on the surface, takeoffs, and landings, a seat belt and shoulder harness (if installed) must be properly secured about each

A) flight crew member only.

B) person on board.

C) flight and cabin crewmembers.

584. B08 COM

Which minimum flight visibility and distance from clouds is required for a day VFR helicopter flight in Class G airspace at 3,500 feet MSL over terrain with an elevation of 1,900 feet MSL?

A) Visibility-3 miles; distance from clouds-1,000 feet below, 1,000 feet above, and 1 mile horizontally.

B) Visibility-3 miles; distance from clouds-500 feet below, 1,000 feet above, and 2,000 feet horizontally.

C) Visibility-1 mile; distance from clouds-500 feet below, 1,000 feet above, and 2,000 feet horizontally.

585. B08 COM

Basic VFR weather minimums require at least what visibility for operating a helicopter within Class D airspace?

A) 1 mile.

B) 2 miles.

C) 3 miles.

586. B08 COM

Minimum safe altitude rules require that helicopter pilots

A) not fly closer than 500 feet to any person, vessel, vehicle, or structure.

B) not fly lower than 500 feet, except when necessary for takeoff or landing.

C) comply with routes and altitudes prescribed by the FAA.

587. B12 COM

No person may operate an aircraft that has an experimental airworthiness certificate

A) under instrument flight rules (IFR).

B) when carrying property for hire.

C) when carrying persons or property for hire.

588. H719 COM

(Refer to figure 39.)

GIVEN:

| | WEIGHT | ARM (IN) | MOMENT (IN.-LBS) |
|---|---|---|---|
| Empty weight | 1,700 | +6.0 | +10,200 |
| Pilot weight | 200 | -31.0 | ? |
| Oil (8 qt, all usable) | ? | +1.0 | ? |
| Fuel (50 gal, all usable) | ? | +2.0 | ? |
| Baggage | 30 | -31.0 | ? |
| TOTALS | ? | ? | ? |

If the datum line is located at station 0, the CG is located approximately

A) 1.64 inches aft of datum.

B) 1.64 inches forward of datum.

C) 1.66 inches forward of datum.

589. H719 COM

(Refer to figure 40.)

GIVEN:

| | |
|---|---|
| Basic weight (oil is included) | 830 lb |
| Basic weight moment (1,000/in.-lb) | 104.8 |
| Pilot weight | 175 lb |
| Passenger weight | 160 lb |
| Fuel | 19.2 gal |

The CG is located

A) well aft of the aft CG limit.

B) within the CG envelope.

C) forward of the forward CG limit.

590. H719 COM

A helicopter is loaded in such a manner that the CG is located aft of the aft allowable CG limit. Which is true about this situation?

A) In case of an autorotation, sufficient aft cyclic control may not be available to flare properly.

B) This condition would become more hazardous as fuel is consumed, if the main fuel tank is located aft of the rotor mast.

C) If the helicopter should pitchup due to gusty winds during high-speed flight, there may not be sufficient forward cyclic control available to lower the nose.

591. H719 COM

A helicopter is loaded in such a manner that the CG is located forward of the allowable CG limit. Which is true about this situation?

A) This condition would become less hazardous as fuel is consumed if the fuel tank is located aft of the rotor mast.

B) In case of engine failure and the resulting autorotation, sufficient cyclic control may not be available to flare properly to land.

C) Should the aircraft pitchup during cruise flight due to gusty winds, there may not be enough forward cyclic control available to lower the nose.

592. B08 COM

Which is true regarding flight operations in Class A airspace?

A) May conduct operations under visual flight rules.

B) Aircraft must be equipped with approved distance measuring equipment (DME).

C) Aircraft must be equipped with an ATC transponder and altitude reporting equipment.

593. B08 COM

Which is true regarding flight operations in Class A airspace?

A) Must conduct operations under instrument flight rules.

B) Aircraft must be equipped with approved distance measuring equipment (DME).

C) Aircraft must be equipped with an approved ATC transponder.

594. B10 COM

On an instrument approach where a DH or MDA is applicable, the pilot may not operate below, or continue the approach unless the

A) flight visibility and ceiling are at, or above, the published minimums for that approach.

B) approach and runway lights are distinctly visible to the pilot.

C) aircraft is continuously in a position from which a descent to a normal landing, on the intended runway, can be made.

595. B10 COM

The pilot in command of an aircraft operated under IFR, in controlled airspace, not in radar contact, shall report by radio as soon as possible when

A) passing FL 180.

B) changing control facilities.

C) passing each designated reporting point, to include time and altitude.

596. A20 COM

To act as pilot-in-command of an airplane with more than 200 horsepower, a person is required to

A) receive and log ground and flight training from a qualified pilot in such an airplane.

B) receive and log ground and flight training from an authorized instructor in such an airplane.

C) obtain an endorsement from a qualified pilot stating that the person is proficient to operate such an airplane.

597. A20 COM

To serve as second in command of an airplane that is certificated for more than one pilot crewmember, and operated under part 91, a person must

A) hold at least a commercial pilot certificate with an airplane category rating.

B) within the last 12 months become familiar with the required information, and perform and log pilot time in the type of airplane for which privileges are requested.

C) receive and log flight training from an authorized flight instructor in the type of airplane for which privileges are requested.

598. B11 COM

Approved flotation gear, readily available to each occupant, is required on each airplane if it is being flown for hire over water,

A) in amphibious aircraft beyond 50 NM from shore.

B) beyond power-off gliding distance from shore.

C) more than 50 statute miles from shore.

599. B12 COM

Which is true with respect to operating limitations of a 'primary' category airplane?

A) A 'primary' category airplane is limited to a specified operating radius from its home base.

B) A pilot of a 'primary' category airplane must hold a commercial pilot certificate when carrying passengers for compensation or hire.

C) No person may operate a 'primary' category airplane carrying passengers or property for compensation or hire.

600. B07 COM

What person is directly responsible for the final authority as to the operation of the airplane?

A) Certificate holder.

B) Airplane owner/operator.

C) Pilot in command.

601. B08 COM

Before beginning any flight under IFR, the pilot in command must become familiar with all available information concerning that flight. In addition, the pilot must

A) be familiar with all instrument approaches at the destination airport.

B) list an alternate airport on the flight plan, and confirm adequate takeoff and landing performance at the destination airport.

C) be familiar with the runway lengths at airports of intended use, and the alternatives available, if the flight cannot be completed.

602. B08 COM

Before beginning any flight under IFR, the pilot in command must become familiar with all available information concerning that flight. In addition, the pilot must

A) be familiar with all instrument approaches at the destination airport.

B) list an alternate airport on the flight plan, and confirm adequate takeoff and landing performance at the destination airport.

C) be familiar with the runway lengths at airports of intended use, weather reports, fuel requirements, and alternatives available, if the planned flight cannot be completed.

603. B07 COM

Portable electronic devices which may cause interference with the navigation or communication system may not be operated on a U.S.- registered civil aircraft being flown

A) along Federal airways.

B) within the U.S.

C) in air carrier operations.

604. B08 COM

No person may operate an aircraft in simulated instrument flight conditions unless the

A) pilot has filed an IFR flight plan and received an IFR clearance.

B) other control seat is occupied by a safety pilot, who holds at least a private pilot certificate and is appropriately rated.

C) other control seat is occupied by at least an appropriately rated commercial pilot.

605. A02 COM

14 CFR part 1 defines $V_Y$ as

A) speed for best rate of descent.

B) speed for best angle of climb.

C) speed for best rate of climb.

606. B11 COM

What transponder equipment is required for helicopter operations within Class B airspace? A transponder

A) with 4096 code and Mode C capability.

B) is required for helicopter operations when visibility is less than 3 miles.

C) with 4096 code capability is required except when operating at or below 1,000 feet AGL under the terms of a letter of agreement.

607. B08 COM

Minimum safe altitude rules authorize helicopter pilots to

A) fly closer than 500 feet to any person, vehicle, vessel, or structure on the surface.

B) fly at less than 500 feet if they do not create a hazard to persons or property on the surface.

C) fly at less than 500 feet.